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**COUNTY OF MAUI**
**DEPARTMENT OF**
**ENVIRONMENTAL MANAGEMENT**
2145 KAOHU STREET, SUITE 102
WAILUKU, MAUI, HAWAI'I 96793

February 16, 2023

Scott Glenn, Director
Office of Planning and Sustainable Development
Environmental Review Program
State of Hawai'i
235 South Beretania Street, Room 702
Honolulu, Hawai'i 96813

**SUBJECT: HELENE HALL SEPTIC SYSTEM IMPROVEMENTS; HĀNA, MAUI; PUBLICATION OF THE FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT**

The Department of Environmental Management hereby submits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Helene Hall Septic System Improvements project for publication in the next available edition of the Environmental Notice. The proposed project involves Tax Map Key TMK (2)1-4-004:034(por.), TMK (2)1-4-004:029(por.) and TMK (2)1-4-004:999(por.) which includes portions of the Keawa Place and Uakea Road rights-of-way (ROWs) in Hāna, Maui.

In addition to this letter, we have also submitted the electronic version of the Environmental Review Program Publication Form and a searchable PDF-formatted copy of the FEA-FONSI through the online submission platform.

If you have any questions, please contact the project manager, Mr. Juan A. Rivera, P.E at (808) 270-7268 or via email at juan.rivera@co.maui.hi.us.

Sincerely,

cn=Robert Schmidt, o=Deputy Director,
ou=Dept of Environmental Management,
email=Robert.Schmidt@co.maui.hi.us,
c=US
2023.02.16 14:55:49 -10'00'

for SHAYNE AGAWA, P.E.
Director of Environmental Management

cc: Juan Rivera, County of Maui, Department of Environmetnal Management
Sean Klein, Kennedy Jenks
Kari Luna Nunokawa, Munekiyo Hiraga
Emily Murai, Munekiyo Hiraga
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Final EA\0Final EA ERP Submittals\Final_EA_FONSI_Letter.docx

**From:** webmaster@hawaii.gov
**To:** DBEDT OPSD Environmental Review Program
**Subject:** New online submission for The Environmental Notice
**Date:** Wednesday, March 1, 2023 3:27:00 PM

---

**Action Name**

Proposed Helene Hall Septic System Improvements

**Type of Document/Determination**

Final environmental assessment and finding of no significant impact (FEA-FONSI)

**HRS §343-5(a) Trigger(s)**

- (1) Propose the use of state or county lands or the use of state or county funds
- (3) Propose any use within a shoreline area

**Judicial district**

Hāna, Maui

**Tax Map Key(s) (TMK(s))**

(2) 1-4-004:034(por.); (2)1-4-004:029(por.) and (2)1-4-004:999(por.)

**Action type**

Agency

**Other required permits and approvals**

Chapter 343, Hawai‘i Revised Statutes Compliance, National Pollutant Discharge Elimination System (NPDES) Permit, as applicable, Permit to Perform Work on State Highways, Hawai‘i Revised Statutes (HRS) Section 6E Review, Special Management Area (SMA) Use Permit, Shoreline Setback Variance, Construction Permits (Building, Grubbing, Electrical, Plumbing), Special Flood Hazard Area Development Permit, Work on County Highway Permit.

**Proposing/determining agency**

County of Maui, Department of Environmental Management

**Agency contact name**

Juan Rivera

**Agency contact email (for info about the action)**

environmental.mgmt@mauicounty.gov

**Agency contact phone**

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Map It

**Was this submittal prepared by a consultant?**

Yes

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305 High Street
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Map It

**Action summary**

The Department of Environmental Management (DEM) is proposing to upgrade the existing wastewater reclamation system at Helene Hall in Hanā, Maui, Hawai'i and relocate it by the Hanā Ball Park parking lot about a quarter (1/4) mile mauka from Hanā Bay. The Applicant proposes to rehabilitate one (1) aerobic treatment unit (ATU) with a new aeration blower and to repurpose the other as a wastewater pump station. The wastewater will then be pumped uphill from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park via an underground 1.5-inch diameter force main that runs approximately 1,500 feet along Keawa Place and Uakea Road. The proposed work to be done along Keawa Place and Uakea Road will take place within existing rights-of way (ROWs). Upon project completion, the existing cesspools will be abandoned and closed in accordance with the State of Hawai'i Department of Health Hawai'i Administrative Rules, Title 11, Chapter 62, for Wastewater Systems.

**Reasons supporting determination**

Refer to Section VIII Significance Criteria Assessment of the Final EA.

**Attached documents (signed agency letter & EA/EIS)**

- Helene_Hall_Septic_System_Improvements_Final_EA_Volume-II-of-II_Feb-2023.pdf
- Helene_Hall_Septic_System_Improvements_Final_EA_Volume-I-of-II_Feb-2023.pdf
- Helene_Hall_Septic_System_Improvements_DEM_FONSI_02.16.23.pdf

**Shapefile**

- The location map for this Final EA is the same as the location map for the associated Draft EA.

**Action location map**

- Helene_Hall_Septic_System_Improvements_Final_EA.Shapefile.zip

**Authorized individual**

Emily Murai

**Authorization**

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

# VOLUME I OF II

# Final Environmental Assessment

## PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS HĀNA, MAUI, HAWAIʻI

### (TMK NOS. (2)1-4-004:034, (2)1-4-004:029(por.), and (2)1-4-004:999(por.)

**Prepared for:**

**County of Maui,**
**Department of Environmental Management**

**February 2023**

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# VOLUME I OF II

# Final Environmental Assessment

## PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS HĀNA, MAUI, HAWAI‘I

### (TMK NOS. (2)1-4-004:034, (2)1-4-004:029(por.), and (2)1-4-004:999(por.)

**Prepared for:**

**County of Maui,**
**Department of Environmental Management**

**February 2023**

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# Executive Summary

| | |
|---|---|
| **Project Name:** | Proposed Helene Hall Septic System Improvements |
| **Type of Document:** | Final Environmental Assessment |
| **Legal Authority:** | Chapter 343, Hawai‘i Revised Statutes<br>Section 11-200.1-8, Hawai‘i Administrative Rules |
| **Anticipated Determination:** | Finding of No Significant Impact (FONSI) |
| **Applicable Environmental Assessment review “Trigger”:** | Use of State and County lands and County funds |
| **Location:** | Hāna, Maui, Hawai‘i 96713<br>TMK Nos. (2)1-4-004:034, (2)1-4-004:029(por.), and (2)1-4-004:999(por.) |
| **Applicant:** | County of Maui<br>Department of Environmental Management<br>One Main Plaza<br>2200 Main Street, Suite 610<br>Wailuku, Hawai‘i 96793<br>Contact: Juan Rivera, Capital Improvements Program Manager<br>Phone: (808) 270-7268 |
| **Proposing and Approving Agency:** | County of Maui<br>Department of Environmental Management<br>One Main Plaza<br>2200 Main Street, Suite 610<br>Wailuku, Hawai‘i 96793<br>Contact: Juan Rivera, Capital Improvements Program Manager<br>Phone: (808) 270-7268<br>Email: environmental.mgmt@mauicounty.gov |
| **Consultant:** | Munekiyo Hiraga<br>305 High Street, Suite 104<br>Wailuku, Hawai‘i 96793<br>Contact: Emily Murai, Associate<br>Phone: (808) 983-1233 |

**Project Summary:**

The County of Maui, Department of Environmental Management ("DEM" or "Applicant") is proposing to upgrade the wastewater reclamation system at Helene Hall in Hāna, Maui, Hawaiʻi and relocate it by the Hāna Ball Park parking lot about a quarter (1/4) mile mauka from Hāna Bay. To connect the existing Helene Hall wastewater system to its new wastewater system at the nearby Hāna Ball Park parking lot, the project will also involve wastewater improvements along Keawa Place and Uakea Road rights-of-way (ROWs).

The County of Maui (County) owns and operates two (2) onsite aerobic treatment units (ATUs) and two (2) effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed and are serving more as settling and holding tanks for wastewater before it is disposed of in cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This causes the wastewater to back-up into the ATU system and requires staff to pump out the system with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the Applicant proposes to upgrade the existing treatment system and find alternative disposal options.

The Applicant proposes to rehabilitate one ATU with a new aeration blower and repurpose the other as a wastewater pump station. The wastewater will be pumped from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park parking lot. The Helene Hall wastewater will be pumped to the new treatment system and absorption field located at a portion of the Hāna Ball Park parking lot via an underground 1.5 inch force main that runs approximately 1,500 feet along the Keawa Place ROW, which is owned by the State of Hawaiʻi (State), and the Uakea Road ROW, which is owned by the County. Upon completion of the proposed improvements, the County of Maui, Department of Parks and Recreation (DPR) will continue to operate and maintain Helene Hall and the Hāna Ball Park parking lot.

# List of Acronyms

| | |
|---|---|
| AEHR | Annual Erosion Hazard Rate |
| AFI | Archaeological Field Inspection |
| ALD | Average Lot Depth |
| ALISH | Agricultural Lands of Importance to the State of Hawaiʻi |
| amsl | Above Mean Sea Level |
| ATU | Aerobic Treatment Unit |
| BMP | Best Management Practices |
| $BOD_5$ | Biological Oxygen Demand |
| CCD | Census County Division |
| CFR | Code of Federal Regulations |
| cfs | Cubic Feet per Second |
| CIA | Cultural Impact Assessment |
| CO2 EQ | Carbon Dioxide equivalent |
| CSH | Cultural Surveys Hawaiʻi |
| CZM | Coastal Zone Management |
| DBEDT | Department of Business, Economic Development and Tourism |
| DEM | Department of Environmental Management |
| DOH | Department of Health |
| DWS | Department of Water Supply |
| EA | Environmental Assessment |
| FEMA | Federal Emergency Management Agency |
| FONSI | Finding of No Significant Impact |
| FIRM | Flood Insurance Rate Map |
| GHG | Greenhouse gases |
| HAR | Hawaiʻi Administrative Rules |
| HCP | Hana Community Plan |
| HCZMP | Hawaiʻi Coastal Zone Management Program |
| HKNC | Hāna silty clay loam at 3 to 15 percent slopes |
| HRS | Hawaiʻi Revised Statutes |
| in. | Inch |
| LRFI | Literature Review Field Inspection |
| LUC | State Land Use Commission |
| MCC | Maui County Code |
| MIP | Maui Island Plan |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| OHA | Office of Hawaiian Affairs |
| RGB | Rural Growth Boundary |
| ROW | Rights-of-Way |
| SHPD | State Historic Preservation Division |
| SLR-XA | Sea Level Rise Exposure Area |

| | |
|---|---|
| SMA | Special Management Area |
| SS | Shoreline Setback |
| SSSPCP | Site Specific Spill Prevention and Control Plan |
| SSV | Shoreline Setback Variance |
| STB | Small Town Boundary |
| TMK | Tax Map Key |
| UGB | Urban Growth Boundary |
| UHMC | University of Hawaiʻi Maui College |
| USFWS | U.S. Fish and Wildlife Service |

# PROJECT OVERVIEW

# I

# I. PROJECT OVERVIEW

## A. PROJECT LOCATION, EXISTING USE, AND LAND OWNERSHIP

The County of Maui, Department of Environmental Management ("DEM" or "Applicant") is proposing to upgrade the wastewater reclamation system at Helene Hall in Hāna, Maui, Hawaiʻi and relocate it to the Hāna Ball Park parking lot about a quarter (1/4) mile mauka (upland) from Hāna Bay. See **Figure 1**. To connect Helene Hall to its new wastewater system, the project will require wastewater improvements along Keawa Place and Uakea Road rights-of-way (ROWs).

The proposed action will affect two (2) properties in Hāna, Maui, Hawaiʻi. Helene Hall, identified as TMK No. (2)1-4-004:034 (Parcel 34), is owned by the County of Maui, Department of Parks and Recreation (Parks) and is utilized as a community center. See **Figure 2**. The Hāna Ball Park parking lot, identified as TMK No. (2)1-4-004:029 (Parcel 29), is owned by the State of Hawaiʻi (State) with an Executive Order to the County of Maui (County). The two (2) properties are connected via Keawa Place and Uakea Road, which are roadways owned by the State and County, respectively.

The two (2) non-roadway parcels are located within the "Urban" district of the State Land Use Commission (LUC) and within the "Small Town" growth boundary of Maui Island Plan. Parcel 29 is further designated as "Public/Quasi-Public" in the Hāna Community Plan and zoned as "P-1 Public/Quasi-Public". Parcel 34 is designated as "Park" in the Hāna Community Plan and zoned as "Park District".

## B. PROPOSED ACTION

The County owns and operates two (2) onsite aerobic treatment units (ATUs) and two (2) effluent disposal cesspools located west of Helene Hall that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed and are serving more as wastewater settling and holding tanks for wastewater before it is disposed of in the cesspools. Additionally, the cesspools do not have the capacity to discharge the daily flows. This condition causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the Applicant proposes to upgrade the existing treatment system.

The Applicant is proposing to rehabilitate one (1) existing ATU by replacing the existing aeration blower and to repurpose the other existing ATU as a wastewater pump station. The wastewater will be pumped uphill along the roadway from Helene Hall to a new aerobic treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile away. Refer to **Figure 2**. A new secure control panel

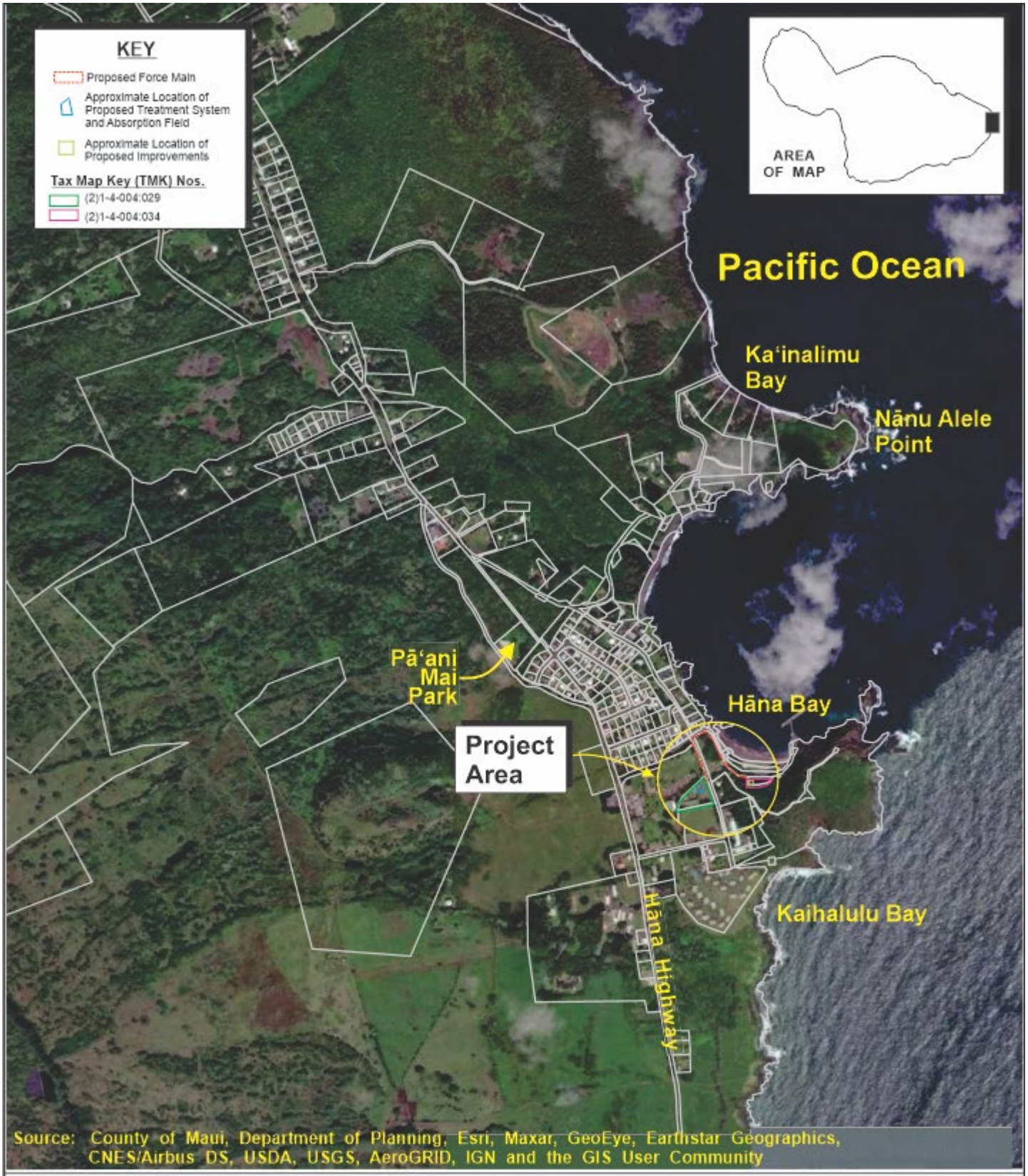



Figure 1

# Proposed Helene Hall Septic System Improvements

## Regional Location Map

0 375 750 1500 Feet

Prepared for: County of Maui, Department of Environmental Management

MUNEKIYO HIRAGA

Kennedy Jenks/Helene Hall WW Upgrade\Applications\Figures\Regional

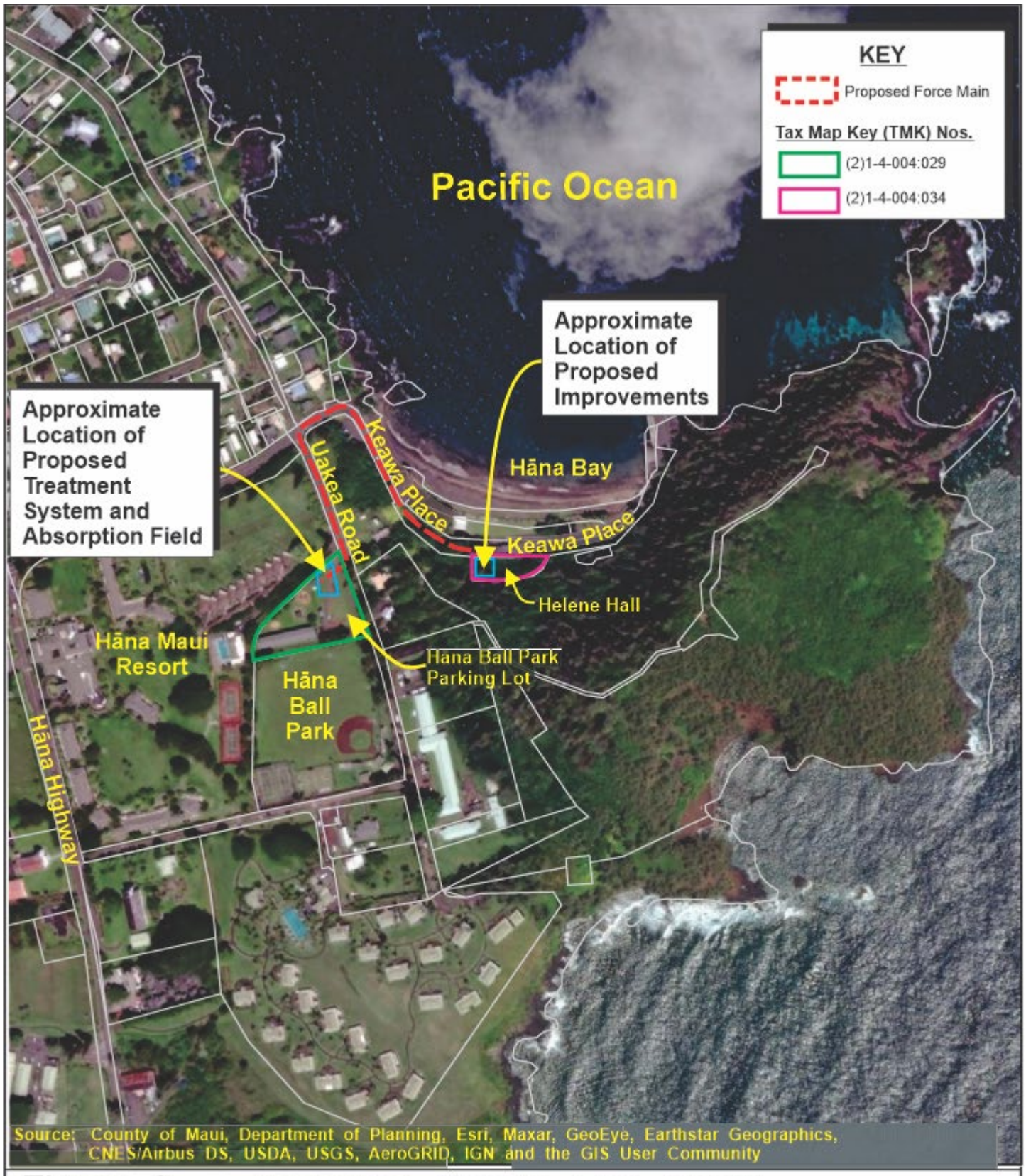



Figure 2 Proposed Helene Hall Septic System Improvements
Project Location Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

MUNEKIYO HIRAGA

Kennedy Jenks\Helene Hall WW Upgrade\Applications\Figures\ProjectSite.DEA

containing electrical appurtenances, switches, alarm indicators, communication devices, and other system components needed for the new blower and pump station will be installed in the back of Helene Hall. A small stainless steel control panel and electrical enclosure for the new aerobic treatment system will be located at the Hāna Ball Park parking lot. The force main connecting the pump station to the new treatment system will be approximately 1,500 feet long and be aligned along Keawa Place and Uakea Road. The force main will be 1.5 inches (in.) in diameter and buried within the existing ROW. See **Appendix "A"**. The existing cesspools will be abandoned and closed in accordance with the State of Hawaiʻi Department of Health (DOH) Hawaiʻi Administrative Rules (HAR) Title 11, Chapter 62, for Wastewater Systems. Additional work includes the following:

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups.

2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily clear pipe clogs.

3. Provide pretreatment at Helene Hall and construct new aerobic treatment unit at Hāna Ball Park parking lot.

4. Construct an offsite traffic rated absorption field at Hāna Ball Park parking lot for effluent disposal.

5. Provide a connection point for the existing preschool wastewater system for future connection to the proposed new aerobic treatment system.

The improvements are anticipated to improve system operability, reliability, and treated water quality. The proposed treatment scheme provides aerobic pretreatment, which will enhance biological oxygen demand ($BOD_5$) removal and reduce the size of the new treatment unit at the ball park.

## C. CHAPTER 343, HAWAIʻI REVISED STATUTES

The use of State and County lands and County funds will require an Environmental Assessment (EA) pursuant to Chapter 343, Hawaiʻi Revised Statues (HRS), and Section 11-200.1-8, Hawaiʻi Administrative Rules (HAR). Therefore, this EA has been prepared pursuant to Chapter 343, HRS, and Chapter 11-200.1-8, HAR, to evaluate the technical characteristics, environmental impacts, alternatives, as well as advance findings relative to the significance of the project. The Applicant will serve as the Approving Agency for the EA.

## D. OTHER REGULATORY CONSIDERATION

The project area is located within the County of Maui's Special Management Area (SMA) and a section of the work along Keawa Place is located within the Shoreline Setback. As such, a SMA Use Permit Application and Shoreline Setback Variance (SSV) will be required for the project. The EA will act as the primary supporting document for the SMA Use Permit and SSV applications.

## E. PROJECT COST AND TIME SCHEDULE

The estimated development cost for the Helene Hall Septic System Improvements Project is $1.3 million. The project is anticipated to begin construction in 2023 and take 12 months to complete.

# DESCRIPTION OF THE EXISTING CONDITIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES

# II

# II. DESCRIPTION OF THE EXISTING CONDITIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES

## A. PHYSICAL SETTING

### 1. Surrounding Land Uses

#### a. Existing Conditions

The project site is located in Hāna, Maui. Refer to **Figure 1**. The Hāna area is characterized by a combination of urban, rural, and agricultural uses. The project site encompasses portions of the Helene Hall property, the Hāna Ball Park parking lot, and the rights-of-way (ROWs) of Keawa Place and Uakea Road. Refer to **Figure 2**.

Helene Hall is surrounded by Hāna Bay Beach Park, which is east or makai (seaward) of the Helene Hall property, and undeveloped lands to the west and south. The Hāna Ball Park parking lot is bordered by the Hāna-Maui Resort and Hāna Coast Gallery to the west and north, the Hāna Ball Park to the south, and Uakea Road to the east. Helene Hall and the Hāna Ball Park parking lot are connected by Keawa Place and Uakea Road.

#### b. Potential Impacts and Mitigation Measures

The proposed improvements to the Helene Hall septic system are anticipated to result in improved conditions to Hāna Bay, the surrounding neighborhood, and land uses. Land uses surrounding the project area are hotel, park, and public areas. The project site spans portions of a County recreational facility, County and State roadways, and also a portion of a County parking lot, all within developed areas of Hāna. The proposed improvements will allow for Helene Hall, an existing community center, to be utilized as it had been prior to the wastewater system reaching its current deficient status. The subsurface treatment system will be small and only on a portion of the Hāna Ball Park parking lot property, and the absorption field installed will be subsurface. The proposed improvements will not adversely impact the use of the property as a parking lot.

The Helene Hall Septic System Improvements Project addresses the wastewater system for Hāna's community center, which has been out of service for quite some time. This project is a necessity to allow full use of the community center and to avoid any spills or seepage into Hāna Bay.

The project is compatible with the adjacent land uses as it is a utility improvement project necessary for the health and benefit of the public.

## 2. Climate

### a. Existing Conditions

Due to Hawai‘i’s tropical location, Hāna enjoys a climate which is relatively uniform throughout the year. Temperatures have historically averaged between 71.1 degrees and 77.3 degrees Fahrenheit, with peak temperatures historically observed in August and coolest temperatures in February (County of Maui, Office of Economic Development, 2020). Hāna experiences seasonal variations in rainfall, with the highest levels of precipitation occurring between October and April when winter storms hit the area. Precipitation data collected in the region indicate the project site receives approximately 72.15 inches of rain a year (County of Maui, Office of Economic Development, 2020). Hāna is one of the wettest spots on Maui and, on average, experiences 269 days of precipitation per year.

### b. Potential Impacts and Mitigation Measures

Construction of the proposed septic system improvements for the Helene Hall community center is not anticipated to impact local climate conditions.

## 3. Topography and Soil Characteristics

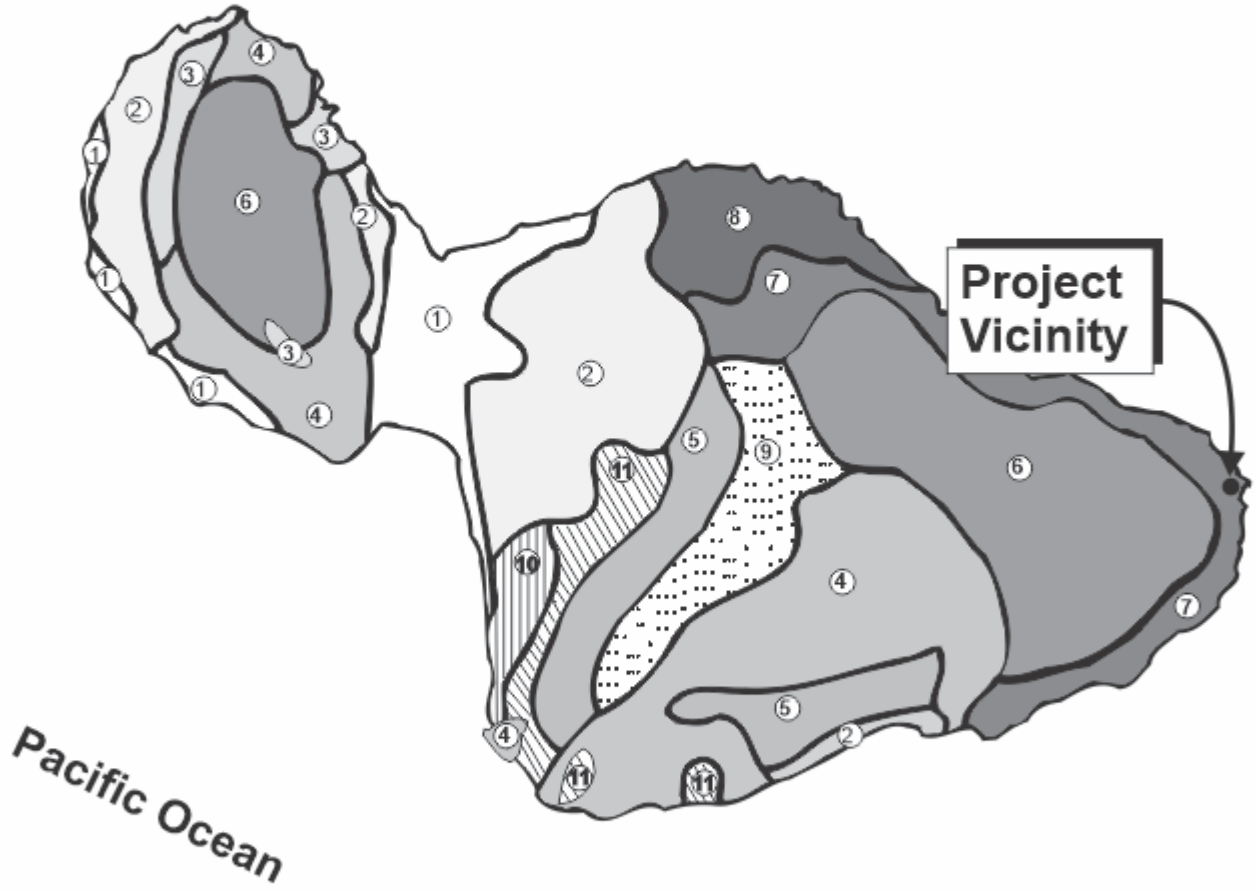
### a. Existing Conditions

According to the *“Soil Survey of Island of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii”*, prepared by the U.S. Department of Agriculture Soil Conservation Service, the underlying soils at the project areas and surrounding lands are soils belonging to the Hāna-Makaalae-Kailua association. See **Figure 3**. The area contains moderately deep and deep/gently sloping well-drained soils. The texture ranges from moderately fine to fine subsoils.

According to the Natural Resources Conservation Service (NRCS), the soil classification specific to the project site is Hāna silty clay loam at 3 to 15 percent slopes (HKNC). See **Figure 4**. The Hāna series consist of well-drained, moderately deep variant soils on the intermediate uplands of East Maui. The survey characterizes the soil as having a thin, dark brown surface layer with moderate permeability. In this series, the runoff is slow

## LEGEND

- ① Pulehu-Ewa-Jaucas association
- ② Waiakoa-Keahua-Molokai association
- ③ Honolua-Olelo association
- ④ Rock land-Rough mountainous land association
- ⑤ Puu Pa-Kula-Pane association
- ⑥ Hydrandepts-Tropaquods association
- ⑦ Hana-Makaalae-Kailua association
- ⑧ Pauwela-Haiku association
- ⑨ Laumaia-Kaipoipoi-Olinda association
- ⑩ Keawakapu-Makena association
- ⑪ Kamaole-Oanapuka association




Map Source: U.S. Department of Agriculture, Soil Conservation Service, 1972

Figure 3

# Proposed Helene Hall Septic System Improvements
## Soil Association Map

NOT TO SCALE

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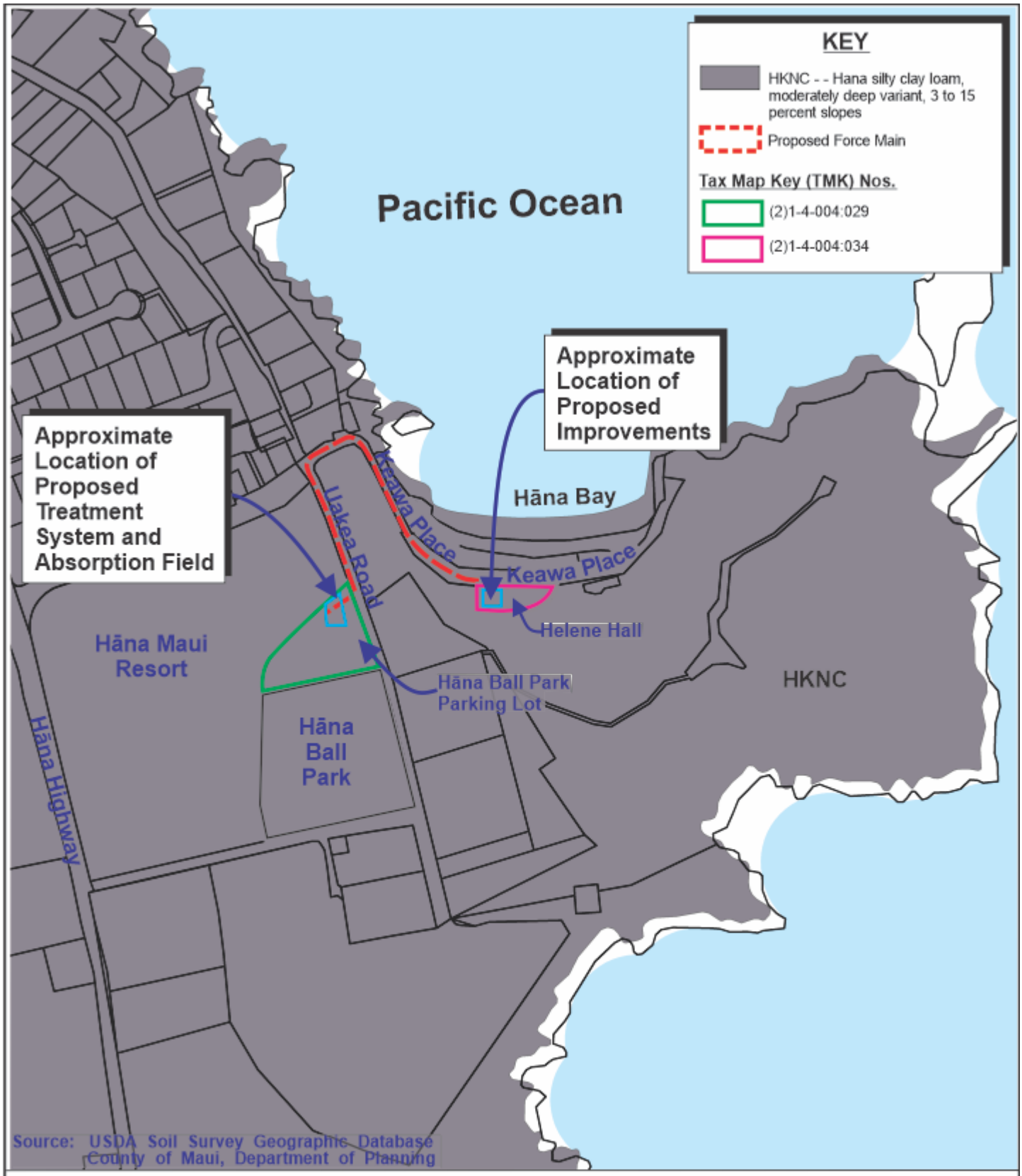


Figure 4

Proposed Helene Hall Septic System Improvements
Soil Classification Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

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to medium and the erosion hazard is slight to moderate (U.S. Department of Agriculture Soil Conservation Service, 1972).

**b. Potential Impacts and Mitigation Measures**

The proposed Helene Hall Septic System Improvements project is compatible with the underlying soil characteristic of the property and, as such, no adverse impacts to the topography or soil characteristics of the project site are anticipated. Topographic conditions of the project site will not be substantially altered and soil characteristics at the project site do not pose construction constraints for the proposed project. Ground disturbing activities associated with the improvements will be completed in accordance with the permit requirements of the State of Hawaiʻi, Department of Health (DOH) and the National Pollutant Discharge Elimination System (NPDES).

To control runoff, sedimentation, and erosion, a program of Best Management Practices (BMPs) will be implemented in accordance with the Maui County Code (MCC) Title 20, Chapter 20.08, "Soil Erosion and Sedimentation Control" and the Department of Public Works (DPW) Title MC-15 Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui" and Title MC-15, Chapter 111, "Rules for the Design of Storm Water Treatment Best Management Practices". BMPs include, but is not limited to, the use of filter socks, trench perimeter protections, and sediment filters for drain inlets.

## 4. Agricultural Lands

**a. Existing Conditions**

The lands underlying the subject properties are located within the State "Urban" district, and as such have supported business, commercial, and public/quasi-public activities for decades.

In 1977, the State Department of Agriculture developed a classification system to identify Agricultural Lands of Importance to the State of Hawaiʻi (ALISH). The classification system is based primarily, though not exclusively, upon the soil characteristics of the lands. The three (3) classes of ALISH lands are: "Prime", "Unique", and "Other Important" agricultural land, with all remaining lands termed "Unclassified".

"Prime" agricultural lands have soil quality, growing season, and moisture supply necessary to produce sustained crop yields economically. "Unique" agricultural lands possess a combination of soil quality, growing season,

and moisture supply to produce sustained high yields of a specific crop. “Other Important” agricultural lands include those that have not been rated as “Prime” or “Unique”, but are of Statewide or local importance for agricultural use. As long standing urbanized areas, the project areas are designated as “Unclassified”. See **Figure 5**.

**b. Potential Impacts and Mitigation Measures**

The project areas are currently located within the developed areas of Hāna and is not suitable for agricultural activities. As such, implementation of the proposed action is not anticipated to present significant adverse impacts on agricultural land availability or productivity parameters and does not curtail the range of beneficial uses of the environment. BMPs for water quality and air quality will be implemented during the construction period to contain runoff, sedimentation, and dust that may be a result of construction activities.

## 5. Nearshore Water Quality

**a. Existing Conditions**

Helene Hall is located just mauka of Hāna Bay Beach Park on the opposite side of Keawa Place. As such, the existing aerobic treatment units (ATUs) and cesspools pose a threat to the nearshore water quality as there is a risk of wastewater leaking into the ground and percolating to Hāna Bay.

**b. Potential Impacts and Mitigation Measures**

Due to the potential of wastewater seeping into Hāna Bay with the existing ATU system at Helene Hall, the proposed action will help to ensure the health and protection of the marine waters. The Helene Hall bathrooms are currently closed and the sewer system will not be in operation during construction so that there will be no raw sewage in the sewer system during construction. Additionally, prior to commencing construction of the project, the existing sewer system will be isolated, flushed, drained, and cleaned to prevent any possible sewage spills. During construction, BMPs such as filter socks, trench perimeter protections, and sediment filters for drain inlets will be utilized to minimize runoff and possible contamination of nearshore waters. The project will also provide a Site Specific Spill Prevention and Control Plan (SSSPCP) during the testing and commissioning phase which will help to ensure the prevention of water contamination. With implementation of the above-mentioned measures and BMPs, no adverse effects to downstream properties are expected as a result of the proposed activity.

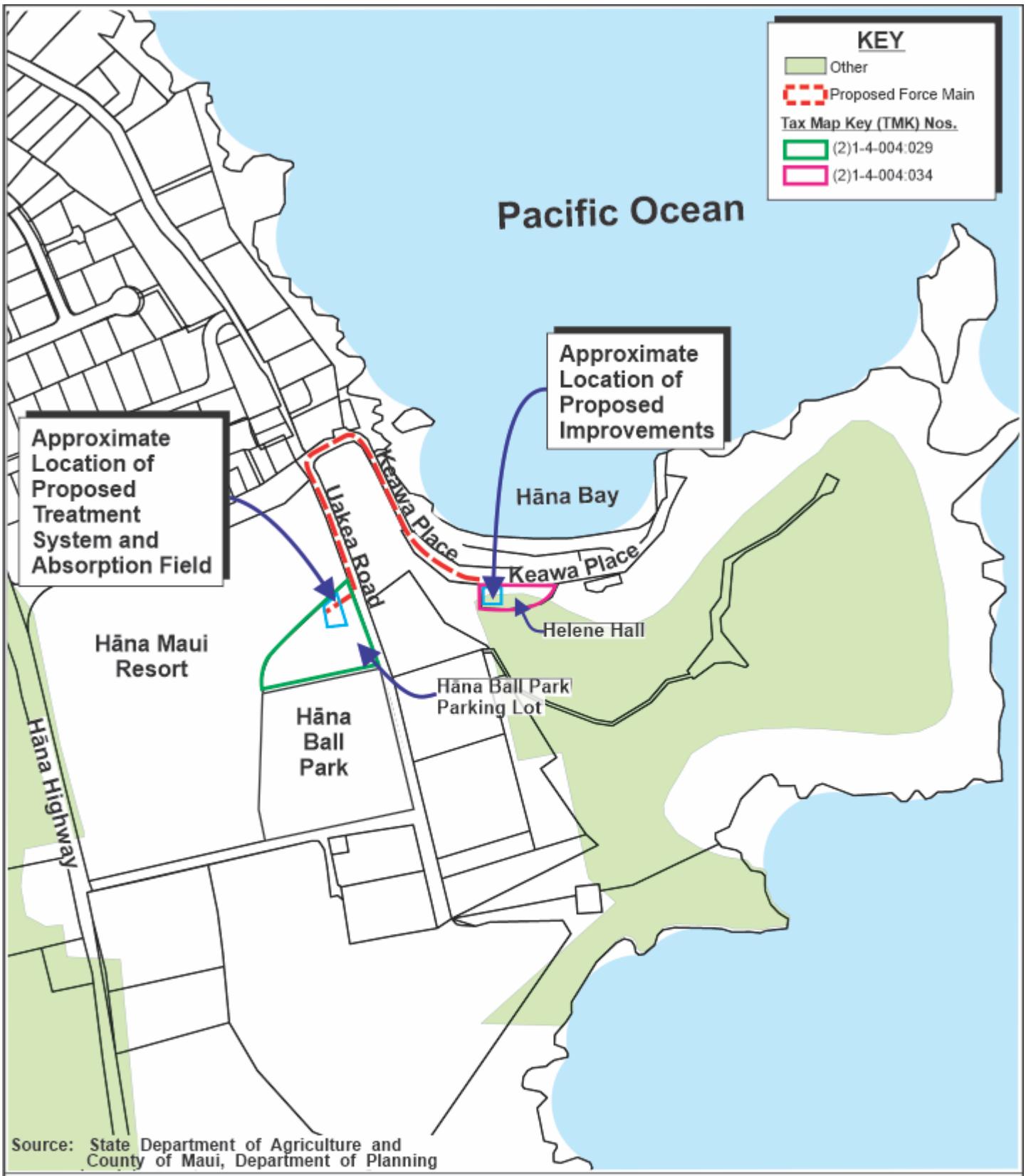


Figure 5 Proposed Helene Hall Wastewater System Upgrade
Agricultural Lands of Importance to the State of Hawai'i Map

0 100 200 400 Feet

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In the long term, the proposed improvements will prevent wastewater leakage into the soil and Hāna Bay, thereby protecting nearshore water quality.

## 6. Streams and Wetlands

### a. Existing Conditions

According to the United States Department of the Interior, Fish and Wildlife Service, National Wetland Inventory Map, there are no streams or wetland features within the project area. Further, the Biological Resources Survey, conducted in April 2021 (see **Appendix "B"**), also concurred that there were no wetlands as defined by the U.S. Army Corps of Engineers which occur on or near the project area. See **Figure 6**.

### b. Potential Impacts and Mitigation Measures

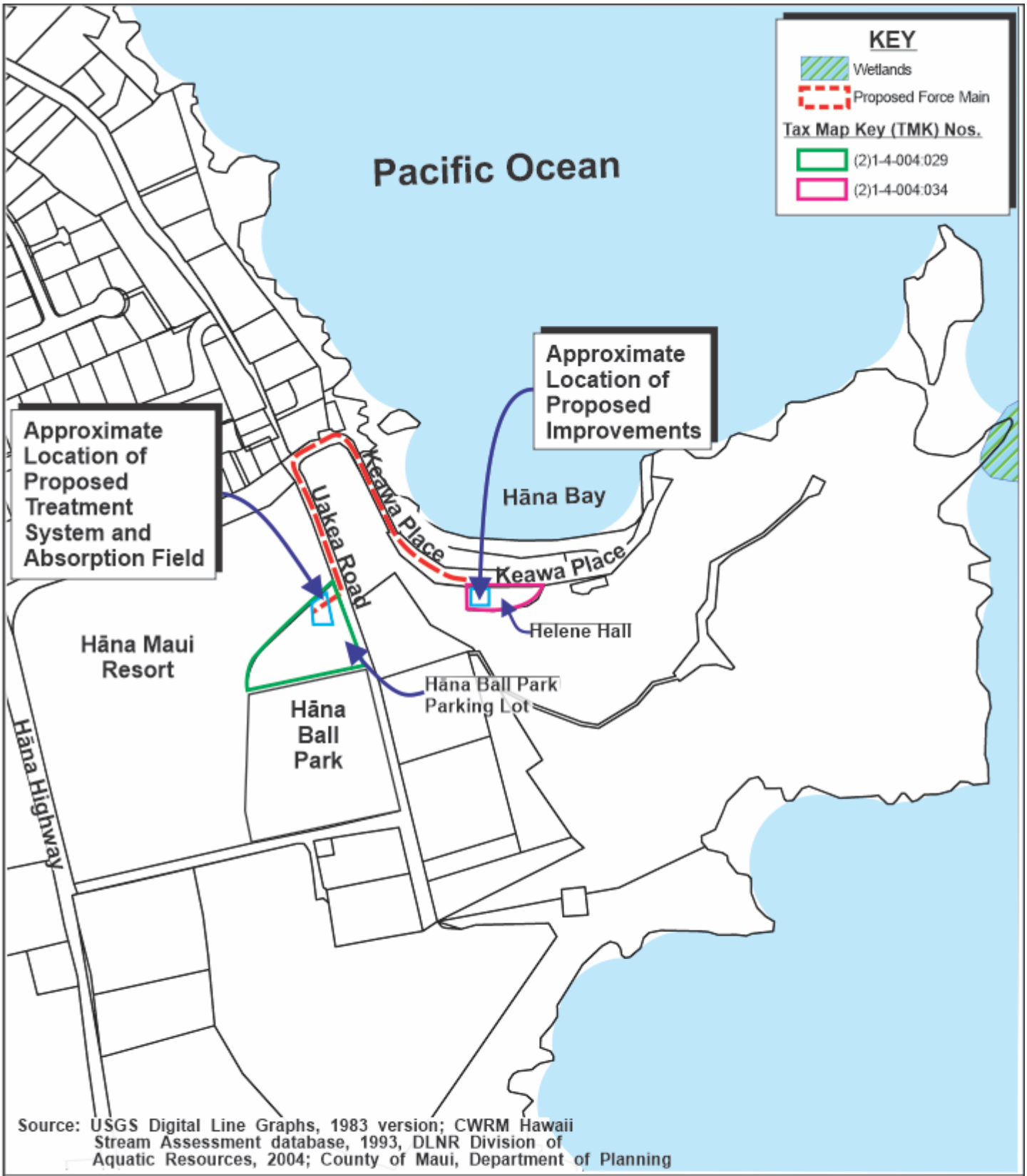
The proposed project is not anticipated to present any significant adverse impacts on streams or wetlands as none are located in the vicinity of the project area. As previously noted, the project will utilize BMPs and provide a SSSPCP to prevent construction related pollution from affecting the nearshore ocean habitat.

## 7. Flood and Tsunami Hazards

### a. Existing Conditions

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) indicates that the project site is located within Flood Zone X and VE. See **Figure 7**. Helene Hall and the Hāna Ball Park parking lot, where most of the construction and rehabilitation will take place, are located in Flood Zone X while portions of the improvements along Keawa Place are located in Flood Zone VE. Construction that will occur on Keawa Place will be contained within the existing ROW.

The National Oceanic and Atmospheric Administration's Tsunami Evacuation Maps designate three (3) areas: 1) the Safe Zone, illustrated in green on the maps, identifies the area which people should evacuate to in the event of a tsunami; 2) the Extreme Tsunami Evacuation Zone, shown in yellow, designates areas which should be evacuated during an Extreme Tsunami Warning; and 3) the Tsunami Evacuation Zone, shown in orange, identifies areas which should be evacuated in the event of any type of Tsunami Warning. During a Tsunami Warning, destructive waves may inundate all coastlines. During an Extreme Tsunami Warning, waves may




Source: USGS Digital Line Graphs, 1983 version; CWRM Hawaii Stream Assessment database, 1993, DLNR Division of Aquatic Resources, 2004; County of Maui, Department of Planning

Figure 6

# Proposed Helene Hall Septic System Improvements

## Wetlands Map

0 100 200 400 Feet

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Prepared for: County of Maui, Department of Environmental Management

Kennedy Jenks/Helene Hall WW Upgrade\Applications\Figures\Wetland

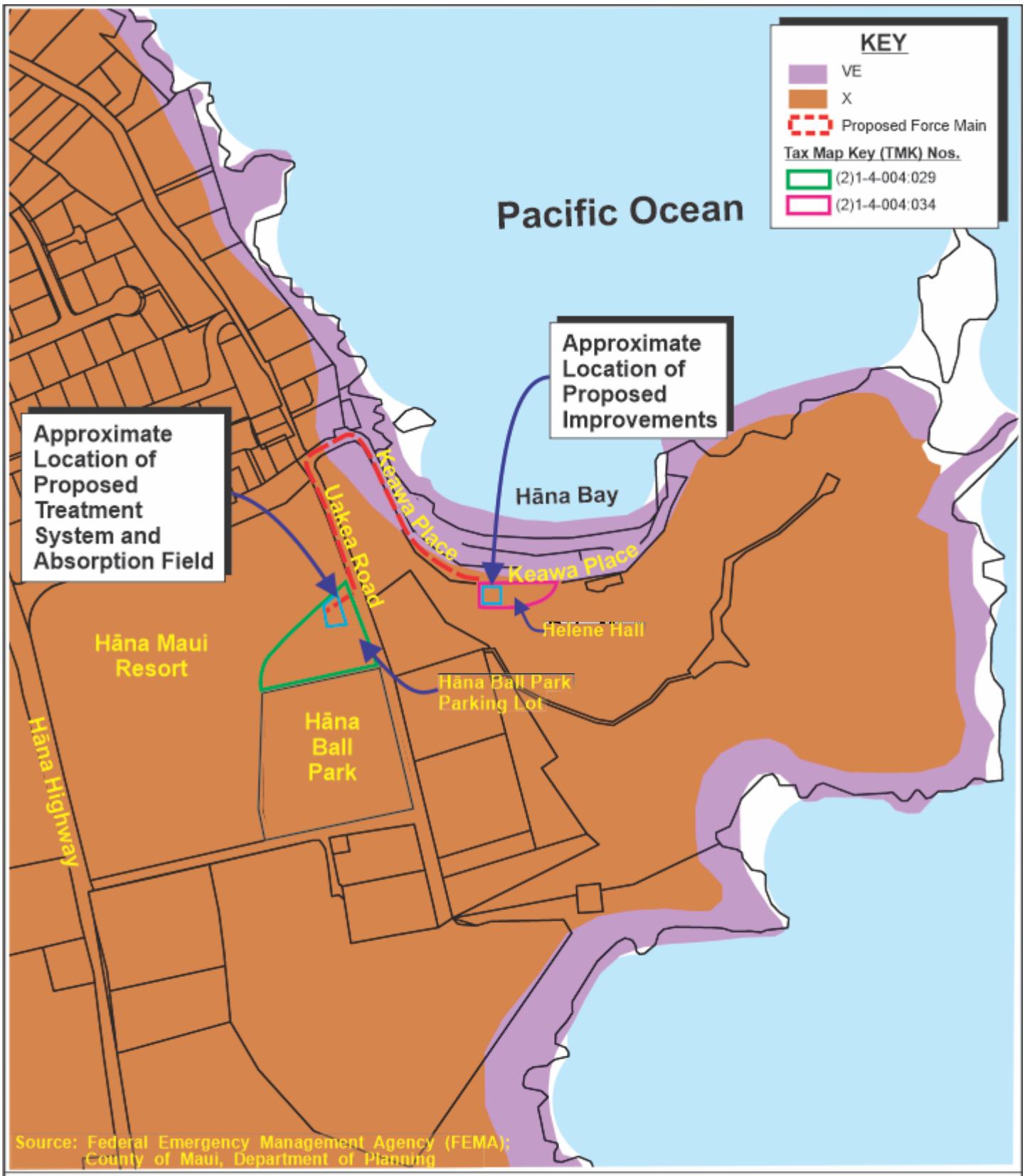


Figure 7

Proposed Helene Hall Septic System Improvements
Flood Insurance Rate Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

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move more significantly inland. The Tsunami Evacuation Map for the project area shows Helene Hall, Keawa Place, and Uakea Road are located within the Tsunami Evacuation Zone. The proposed new treatment system and absorption field are located in the Safe Zone. See **Figure 8**.

**b. Potential Impacts and Mitigation Measures**

The proposed project intends to upgrade existing wastewater infrastructure which is past its useful service life. Furthermore, the proposed action will move portions of the system mauka of the flood zone and outside of the tsunami evacuation zone, into the tsunami safe zone. No adverse impacts with respect to flooding or tsunamis are expected with implementation of the project.

## 8. Sea Level Rise

**a. Existing Conditions**

Due to Hawaiʻi's location in the Pacific, it is often faced with risks due to extreme weather events. Changing climatic patterns caused by global warming result in impacts including rising sea levels, storm surge, increased flood potential, and beach erosion for oceanfront and shoreline parcels. The *Hawaiʻi Sea Level Rise Vulnerability and Adaptation Report* provided the first State-wide assessment of Hawaiʻi's vulnerability to sea level rise and recommendations to reduce exposure and sensitivity to sea level rise and increase the State's capacity to adapt. The report presents a Sea Level Rise Exposure Area (SLR-XA) to depict the area exposed to potential chronic flooding based on modeling of passive flooding, annual high wave flooding, and coastal erosion (Hawaiʻi Climate Change Mitigation and Adaptation Commission, 2017). Although the report provides a range of sea level rise projections and vulnerability scenarios, the 3.2-foot sea level rise exposure area was chosen to depict hazards that may occur in the mid to latter half of this century. According to the Hawaiʻi Climate Change Mitigation and Adoption Commission's mapping tool, both Helene Hall and the Hāna Ball Park parking lot are located outside of the projected 3.2-foot sea level rise exposure area. See **Figure 9**.

**b. Potential Impacts and Mitigation Measures**

The sea level rise mapping tool utilizes three (3) different models to predict how climate change will affect coastal lands throughout Hawaiʻi. The first model predicts high tide (passive) flooding, including groundwater inundation; the second model predicts high wave flooding; and the third

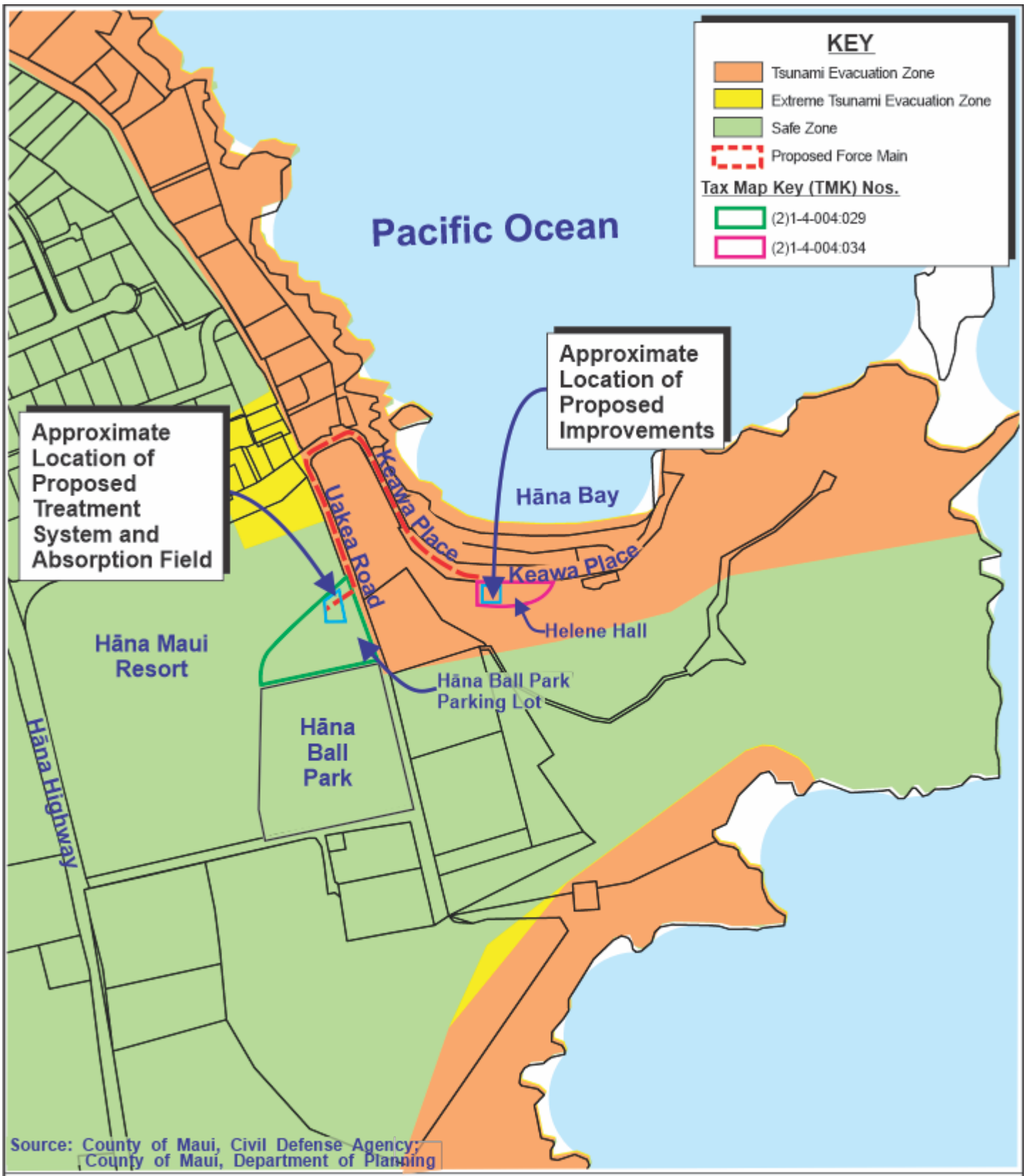


Figure 8

Proposed Helene Hall Septic System Improvements
Tsunami Evacuation Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

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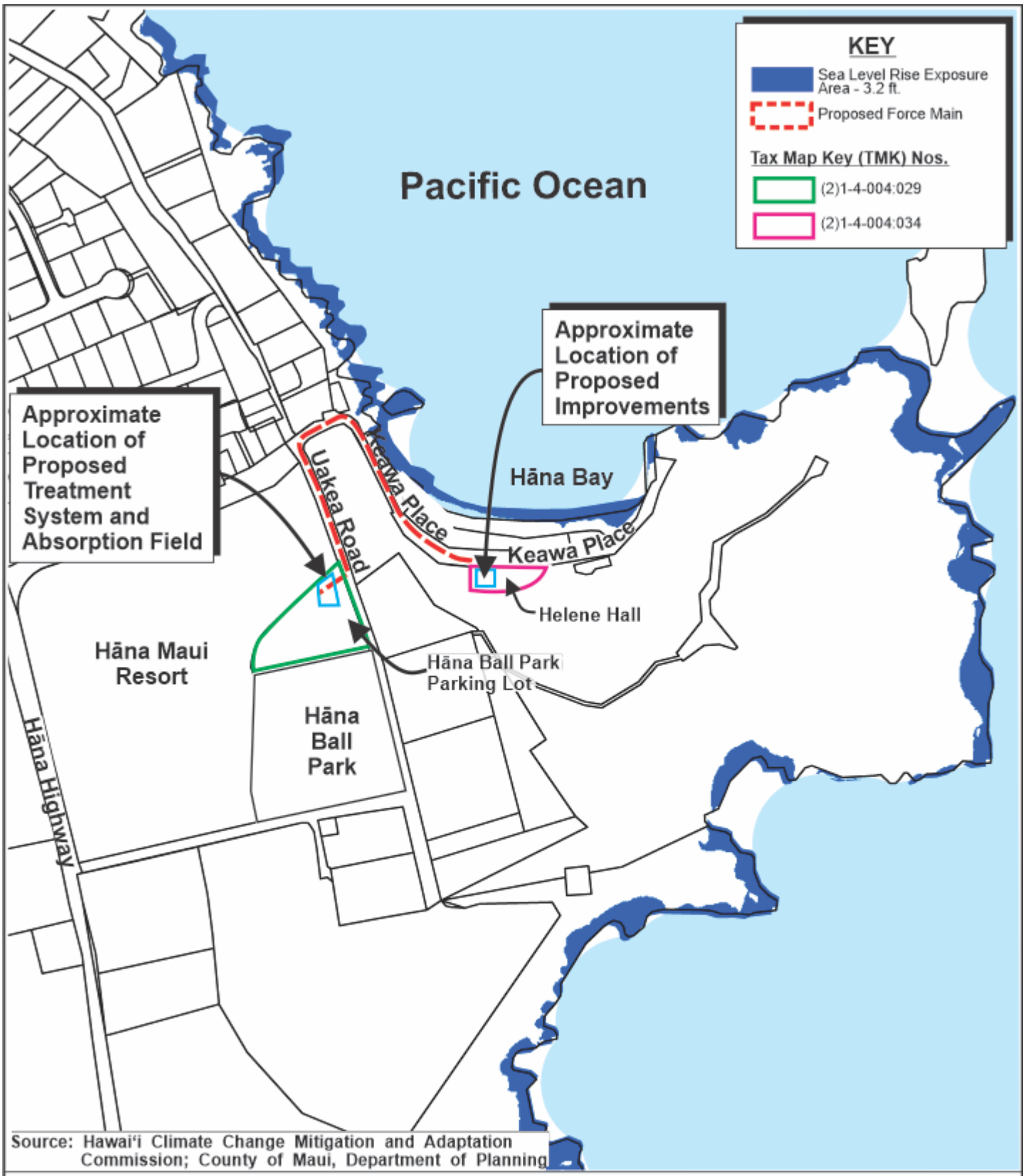


Source: Hawai'i Climate Change Mitigation and Adaptation Commission; County of Maui, Department of Planning

Figure 9

Proposed Helene Hall Septic System Improvements

Sea Level Rise Exposure Area Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

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model predicts coastal erosion. None of the models predict sea level rise impacts to the project area.

Helene Hall and Keawa Place, the two (2) properties closest to the ocean and, therefore, at greatest risk of sea level rise impacts, are completely out of the 3.2-foot sea level rise exposure area. As such, no significant adverse impacts are anticipated as a result of the proposed project.

## 9. Flora and Fauna

### a. Existing Conditions

A Biological Resources Survey was conducted for the proposed project by Robert Hobdy. A walk-through method for the study was conducted in April 2021. All parts of the project area within the corridor were covered. A 40-foot wide corridor was assessed along the approximately 1,200 foot long route. In addition, an evening visit was made to the area to record crepuscular activities and vocalizations to see if there were any evidence of the endangered fauna. Refer to **Appendix "B"**.

#### i. Flora

Observed vegetation included a variety of grasses and roadside weeds that are regularly mowed. There were also a number of ornamental shrubs and a few species of trees. A total of 65 plant species were recorded during the survey. Just two (2) species were common: the hardy, salt-tolerant grass, seashore paspalum (*Paspalum vaginatum*) and the large Indian almond tree (*Terminalia catappa*), several of which line the lower part of the road. Seventeen (17) species were uncommon and 45 were rare. Three (3) common, indigenous native Hawaiian plant species were recorded: the naupaka kahakai (*Scaevola taccada*), the nanea (*Vigna marina*) and the pōpolo (*Solanum americanum*). Five (5) early Hawaiian cultural plant introductions included: kukui (*Aleurites moluccana*), noni (*Morinda citrifolia*), niu (*Cocos nucifera*), kī (*Cordyline fruticosa*) and ʻihiʻai (*Oxalis corniculata*). Fifty-seven (57) species were non-native plants.

#### ii. Fauna

##### (a) Mammals

Two (2) species of mammals were observed in the project area during two (2) site visits: domestic cats (*Felis catus*) and the mongoose (*Herpestes auropunctatus*). While not

seen during the survey, rats (*Rattus spp.*), mice (*Mus domesticus*) and domestic dogs (*Canis familiaris*) would be expected to occur on the project area. Rats and mice feed on fruits, seeds and herbaceous vegetation, while cats and mongoose would hunt for these rodents and birds.

A special effort was made to detect any occurrence of the Hawaiian hoary bat by conducting an evening survey at two (2) locations in the area. A bat detecting device (Batbox IIID) was employed, set to the frequency of 27,000 Hertz that these bats are known to use when echolocating for flying nocturnal insects. No bats were detected with the use of this device.

**(b) <u>Birds</u>**

Birdlife was modest in both species diversity as well as in total numbers within the project corridor. Seven (7) species of birds were recorded during two (2) site visits. Three (3) species were common: the common myna (*Acridotheres tristis*), the zebra dove (*Geopelia striata*) and the house sparrow (*Passer domesticus*). Four (4) other species were of rare occurrence: the kōlea or Pacific golden plover (*Pluvialis fulva*), the spotted dove (*Streptopelia chinensis*), the house finch (*Haemorhous mexicanus*) and the red-crested cardinal (*Paroaria coronata*). The kōlea is an indigenous, migratory species that overwinters in Hawai‘i and then flies up to the artic during the summer to breed and raise their young.

No other native forest birds, seabirds, water birds or the nēnē (Hawaiian goose) were seen, nor are they likely to occur in this habitat.

**(c) <u>Insects</u>**

Insects were only seen in small numbers in this habitat. Just five (5) non-native insects were observed during the two (2) site visits. Four (4) species were uncommon: monarch butterfly (*Danaus plexippus*), the long-tailed blue butterfly (*Lampides boeticus*), the southern house mosquito (*Culex quinquefasciatus*) and the dung fly (*Musca sorbens*). The honeybee (*Apis mellifera*) was of rare occurrence. No native insect species were seen.

## b. Potential Impacts and Mitigation Measures

### i. Flora

The vegetation throughout the project corridor is comprised almost entirely of non-native species that are of no special interest or concern. No federally Endangered or Threatened plant species were found in the project area, nor were any found that are candidates for such status. No special plant habitats were found either.

### ii. Fauna

The fauna within the project area is primarily non-native in character. Just one (1) indigenous native bird species, the kōlea, was recorded. Thousands of kōlea migrate to Hawai‘i during the winter months and can be found in a wide range of habitats on all of the islands. They are quite common and are not of any particular environmental concern.

There are also two (2) species of protected seabirds, the endangered ‘ua‘u or Hawaiian petrel (*Pterodroma sandwichensis*) and the threatened ‘a‘o or Newell’s shearwater (*Puffinus newelli*) that nest in burrows high in the mountains. They would not physically land in the project area but do fly over the coastal lowlands to and from their burrows at dusk and at dawn, respectively. Young fledglings in particular can be drawn to and confused by bright lights and crash into or around light structures with fatal results. As such, outdoor lighting associated with this project will be shielded and downward facing to mitigate this threat.

It is noted that the U.S. Fish and Wildlife Service (USFWS) recommends that measures be incorporated into project planning to avoid or minimize impacts to fish and wildlife resources. Measures applicable to the proposed action include the following:

- Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to, aquatic habitats and should be protected from erosion (e.g., with filter fabric, etc.) to prevent materials from being carried into waters by wind, rain, or high surf.

- Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a

contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained onsite with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored onsite to facilitate the clean-up of accidental petroleum releases.

- All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.

As applicable, the foregoing recommended measures will be implemented to avoid or minimize impacts to fish and wildlife resources.

## 10. Marine Environment

### a. Existing Conditions

No work is proposed on a shoreline abutting property. However, as previously mentioned, Helene Hall is located just mauka of Hāna Bay Beach Park on the opposite side of Keawa Place. As such, there is a risk of wastewater leaking from the existing ATUs and cesspools into the ground and percolating to Hāna Bay.

### b. Potential Impacts and Mitigation Measures

The proposed project seeks to rehabilitate the existing wastewater treatment system that poses a potential hazard to the marine environment. As previously mentioned, the existing sewer system has not been in operation and, therefore, will not contain raw sewage. In addition, prior to commencing construction of the project, the existing sewer system will be isolated, flushed, drained, and cleaned to prevent any possible sewage spills or leakage. A proactive schedule of BMPs and a SSSPCP will be utilized during construction to minimize runoff and possible contamination of downstream properties, including the marine environment in Hāna Bay. Post-construction, the proposed improvements are expected to have a positive impact on the marine environment as the wastewater treatment and absorption field elements of the system will be located further away from the ocean.

## 11. Air Quality

### a. Existing Conditions

The air quality in Hāna is considered good. There are no point sources of airborne emissions in the immediate vicinity of the project site. Although minimal, airborne pollutants are largely attributable to vehicular exhaust from traffic along Keawa Place, Uakea Road, and nearby roadways. These sources, however, are intermittent and prevailing winds quickly disperse the particulates generated by these temporary sources.

### b. Potential Impacts and Mitigation Measures

In the short term, construction-related activities for the proposed project will be the primary source of airborne pollutants affecting air quality. Site work, such as clearing, grubbing, and roadwork construction will generate airborne particulates. Appropriate BMPs will be utilized to minimize air quality impacts associated with project construction. After the completion of construction, the proposed action is not anticipated to generate adverse long-term air quality impacts.

## 12. Greenhouse Gas Emissions

### a. Existing Conditions

Greenhouse gases (GHG) (carbon dioxide, methane, nitrous oxide and fluorinated gases) trap heat in the earth's atmosphere. In the context of climate and ocean warming, increases in levels of atmospheric GHG have been attributed to human activity (IPCC, 2021). Within the State of Hawaiʻi, the energy sector (including fossil fuel burning to produce electricity, transportation, waste incineration, and natural gas systems) is identified as the source of approximately 89 percent of GHG emissions. Other sources of GHG emissions include industrial facilities, agriculture and forestry, and waste treatment such as landfills, composting, and wastewater treatment (Hawaiʻi Department of Health, 2021).

The Federal Greenhouse Gas Reporting Program (40 Code of Federal Regulations (CFR) Part 98) requires mandatory reporting of GHG emissions from sources that emit 25,000 metric tons or more of carbon dioxide equivalent (CO2 EQ) per year in the United States. Categories of use which are generally associated with this level of reporting include power plants, petroleum and natural gas systems, refineries and other heavy manufacturing processes. On Maui, the facilities operating at or above the 25,000 metric ton level include Hawaiian Electric Company's

Kahului Power Plant, Māʻalaea Power Plant, the Hawaiian Commercial Sugary Company Industrial Waste Landfill, and the Central Maui Landfill (U.S. EPA, 2020).

**b. Potential Impacts and Mitigation Measures**

The proposed project involves improvements to Helene Hall, the Hāna Ball Park parking lot, and portions of Keawa Place and Uakea Road that connect the two (2) properties. The proposed action is considered a utilities improvement for the Hāna community. Limited GHG emissions are anticipated during the construction phase of the project as it will take energy to transport equipment to the project site and operate the machinery. Beyond that, adverse levels of GHG emissions are not expected as a result of this project.

Furthermore, the State of Hawaiʻi has set a renewable energy portfolio standard of 100 percent by the year 2045 (Section 269-92, HRS) to minimize dependence on fossil fuel combustion, and has declared a policy to reduce GHG emissions to 1990 levels by the year 2020 (Act 234, Session Laws of Hawaiʻi, 2007). In efforts to reduce emissions, Chapter 11-60.1 of the HAR was amended to place a cap on facilities with potential sources of GHG emissions at or above 100,000 tons per year. The State is on track to meet these goals and emission inventory reports conducted by ICF International, Inc., the University of Hawaiʻi and the State of Hawaiʻi, Department of Health project that Hawaiʻi's GHG emissions in 2017 (excluding aviation emissions) were lower than the net GHG emissions in 1990 which indicates a reduction of GHG emissions statewide (State of Hawaiʻi, Department of Health, 2021).

Based on the foregoing, greenhouse gas emissions from the proposed project are not anticipated to be significant.

## 13. Noise

**a. Existing Conditions**

Existing background noise levels are primarily attributed to waves crashing along the shore and traffic along Keawa Place, Uakea Road, and nearby roadways. Crowds that occasionally gather at Hāna Bay Beach Park, Helene Hall, or at the Hāna Ball Park may also contribute to the ambient noise of the area.

### b. Potential Impacts and Mitigation Measures

Ambient noise conditions will be temporarily impacted by construction activities. Heavy construction equipment and possible vibrations from construction activities would be the dominant source of noise during construction. Appropriate BMPs will be employed to mitigate noise impacts generated by construction machinery and operations. Should a community noise permit be required, it will be obtained from the State DOH by the contractor, prior to the commencement of construction. Construction activities are anticipated to be limited to daytime weekdays with the exception of State and County of Maui holidays. Nighttime work is not anticipated.

Once the improvements are completed, the proposed project is not anticipated to detrimentally affect ambient noise levels.

## 14. Scenic and Open Space Resources

### a. Existing Conditions

The town of Hāna is situated on the eastern slopes of Haleakalā. Helene Hall and Keawa Place are located along Hāna Bay and, as such, have views of the Pacific Ocean. The Hāna Ball Park parking lot, located about a quarter of a mile uphill, has mountain views, but sightlines to the ocean are limited due to thick vegetation. The east side of Haleakalā remains visible from all project areas.

### b. Potential Impacts and Mitigation Measures

The proposed project encompasses an area along the coastline to an area approximately a quarter of a mile further mauka. In the short term, views of the ocean may be impacted during construction due to construction barriers and equipment. Beyond that, the project will not affect views because the proposed improvements will primarily be located at an already existing structure. As well, wastewater treatment and disposal components are, for the most part, subsurface elements. As such, the proposed project is not anticipated to have an adverse impact on the visual character or the open space resources of the area.

## 15. Archaeological and Historical Resources

### a. Existing Conditions

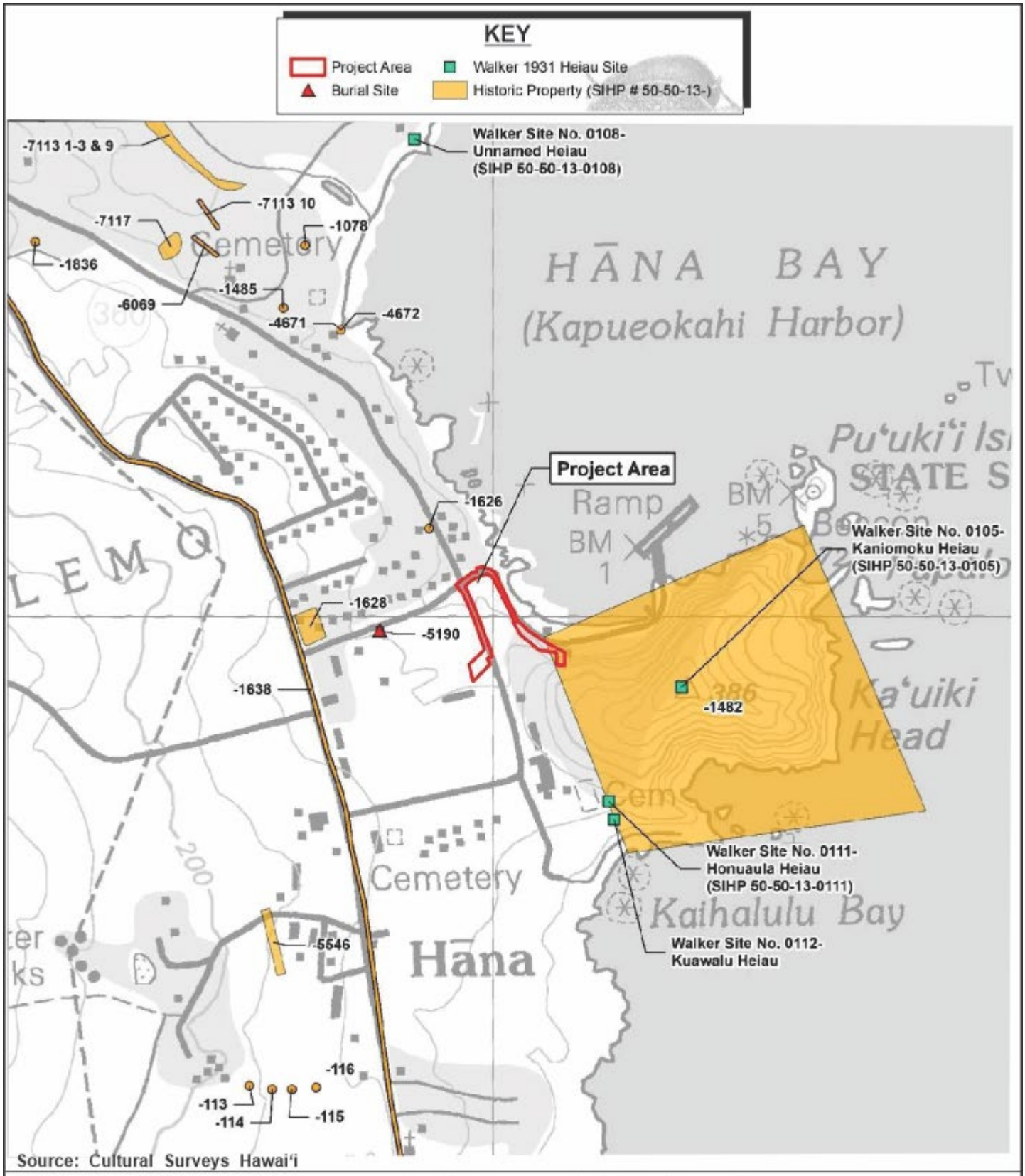
The project engaged in the Chapter 6E consultation process. See **Appendix "C"**. Subsequently, an Archaeological Literature Review and Field Inspection (LRFI) was conducted by Cultural Surveys Hawai'i (CSH) to gather information on the presence or absence of historic properties and potential for subsurface historic properties. Refer to **Appendix "C-1"**. A review of previous archaeological studies in the immediate vicinity of the project area indicates that Fredericksen and Fredericksen (2002) recorded one (1) burial (SIHP # -5190) outside of the current project area to the west. In 1987, the Bernice Pauahi Bishop Museum (Cleghorn and Rogers 1987) conducted archaeological investigations within a portion of the current project area and identified 48 archaeological sites, primarily heiau structures, but 20 have been destroyed likely because of sugar cane cultivation. See **Figure 10**. Refer to **Appendix "C-1"**.

As part of the LRFI, CSH conducted fieldwork in June of 2022 consisting of observations of geotech borings, a 100 percent pedestrian survey and a non-invasive ground penetrating radar (GPR) survey of portions of the project to gather information on subsurface deposits and the potential for GPR anomalies.

CSH conducted observations of the geotechnical borings in December 2020 which consisted of eight (8) bore holes. The observations provided documentation of the general types and variation of stratigraphy within the project area, which includes alluvial loams, silts and clays, basalt bedrock, and marine sand deposits. No cultural materials were observed among the test bores.

CSH also inspected a mortared basalt and formed concrete drainage channel along the southern edge of Keawa Place that appears to be less than 50 years old based on construction style. The drainage channel is only present along Keawa Place and was likely constructed to mitigate flooding and drainage entering into Hāna Bay. The drainage channel does not appear on historic maps and is not associated with a former stream. No further documentation of the drainage channel was conducted of this modern structure.

In addition to the geotech observations and pedestrian field inspection, ground penetrating radar (GPR) survey of three (3) locations within or near the project area was conducted as an attempt to provide additional information on subsurface deposits and the potential for GPR anomalies




Source: Cultural Surveys Hawai'i

Figure 10 Proposed Helene Hall Septic System Improvements Historic Properties Map

NOT TO SCALE

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identified one linear anomaly that may also be associated with an overlying backfilled excavation. It is possible that this linear anomaly is the reflection of a buried utility line that extends through the property, though there are no indications on the surface of a utility line corridor.

**b. Potential Impacts and Mitigation Measures**

As previously mentioned, the State Historic Preservation Division (SHPD) was consulted in June 2021 through the Chapter 6E-8, HRS process. Refer to **Appendix "C"**. In July of 2021, the SHPD responded requesting an archaeological inventory survey (AIS) with a subsurface testing component for the proposed project. Through coordination with the Maui County Archaeologist, the DEM has submitted an LRFI to support a request for reconsideration from the SHPD to instead prepare an Archaeological Monitoring Plan (AMP) opposed to an AIS. Refer to **Appendix "C-1"**.

The pedestrian field survey carried out in June 2022 did not identify any historic properties within the project area. While no historic properties were observed within the current project area, CSH observed potential historic properties located near, but outside the project area, including a stacked stoned retaining wall and multi-tiered retaining wall that appears to be related to a former plantation railroad alignment. No further documentation of these potential historic properties was conducted since they are believed to be outside of the current project area and, therefore, will not be affected by project-related ground disturbance.

In a letter dated January 24, 2023, the SHPD concurred with the County of Maui's recommendation for the preparation of an AMP. See **Appendix "C-2"**. As such, an AMP has been prepared for SHPD's review and acceptance. See **Appendix "C-3"**. Ground disturbing activity will not proceed until the SHPD has reviewed and approved the proposed AMP. The DEM will continue consultation with the SHPD to ensure potential impacts to historic and archaeological resources are appropriately mitigated, as necessary.

## 16. Cultural Resources

**a. Existing Conditions**

A Cultural Impact Assessment (CIA) was conducted by CSH for the proposed project which involved background research on the project area and outreach to 45 Native Hawaiian Organizations (NHOs), agencies and community members. See **Appendix "D"**.

The island of Maui was first divided into political districts during the rule of Kakaʻalaneo under the direction of his kahuna (priest) named Kalaihaʻōhiʻa. Chief Piʻilani would later unite all of Maui under his rule during the sixteenth or seventeenth century. Maui chiefs ruled Hāna until its conquest in the mid–18th century by Hawaiʻi Island's Chief Kalaniʻōpuʻu. Decades of war would continue with Maui Chief Kahekili resuming rule of Hāna and all of Maui until it was incorporated into the united kingdom of Hawaiʻi by Kamehameha in 1790. With the death of Kahekili and the assistance of newly acquired foreign weapons, Kamehameha gained control not only of Maui, but of all the Hawaiian Islands, except Kauaʻi, by 1795. Hāna is also associated with the aliʻi nui (supreme elite) Keʻeaumoku Papaiaheahe and his ʻohana. His daughter, born at Puʻu Kaʻuiki in the late 18th century, became Queen Kaʻahumanu, wife of Kamehameha I. Background research revealed that fishing and use of heiau for ceremonial and religious practices were traditionally conducted in the Kawaipapa Ahupuaʻa in which the project is located.

Beginning in the mid-19th century, sugar, coffee and rubber plantations were formed in Hāna. During this early period of commercialization, small-scale farmers would grow sugar cane to sell to the sugar mills. However, by the end of the 19th century, Hāna Plantation had taken over large tracts of land and smaller farmers disappeared, as did most of the remains associated with this era. The paving of the Hāna Highway in 1962 increased tourist visitation in the project area vicinity. Afterwards, infrastructure and development projects in the 1970s through the present shaped the current landscape.

Outreach resulted in written testimony from the State of Hawaiʻi, Department of Land and Natural Resources Commission on Water Resource Management (CWRM). The CWRM recommended use of Best Management Practices (BMPs) for stormwater management and review of the project by the State of Hawaiʻi, Department of Health (DOH) to ensure water quality requirements are met. However, no other agencies or individuals provided input on cultural impacts from the project.

**b. <u>Potential Impacts and Mitigation Measures</u>**

As recommended by the CWRM, BMPs for stormwater management will be implemented to mitigate potential impacts to water resources and the DOH has had the opportunity to review the Draft EA and will also be provided notice of the publication of the Final EA for review should they wish to provide comments. In addition, the DEM will implement the CIA's following recommended mitigation measures that may aid in promoting and

preserving cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups.

1. Project construction workers and all other personnel involved in the construction and related activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that iwi kūpuna (ancestral remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43, is recommended.

2. In the event that iwi kūpuna and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance.

As a result of the lack of community comments and due to Helene Hall's longstanding presence in Hāna, the CIA concluded that the project does not pose significant impacts to ongoing and future cultural practices in the project area.

## 17. Traditional Beach and Mountain Access

### a. Existing Conditions

The project is not located within a known traditional mauka and makai route. However, Helene Hall and Keawa Place are located next to Hāna Bay Beach Park. Keawa Place is the primary access road to Hāna Bay.

### b. Potential Impacts and Mitigation Measures

Construction activities along Keawa Place may require temporary traffic detouring during the installation of the 1.5 in. force main. The Applicant will utilize a traffic management plan to minimize roadway disruptions and has committed to maintaining at least a single access lane throughout the construction period. The public will still be able to access the beach and park recreation areas.

Post-construction, no impacts to beach or mountain access are anticipated as a result of the proposed project.

# B. SOCIO-ECONOMIC ENVIRONMENT

## 1. Regional Setting

### a. Existing Conditions

The Hāna region includes Hāna Town, the neighboring coastal communities of Ke‘anae, Kīpahulu, and Kaupō, and extends west to Nāhiku. Hāna Town serves as the population center of these East Maui communities. The economy in Hāna is primarily based on diversified agriculture, the visitor industry, government services, and subsistence activities. Diversified agricultural activities include ranching, as well as the cultivation of taro and tropical fruits, flowers, and foliage. Businesses, government services, and visitor accommodations are centered in Hāna Town.

### b. Potential Impacts and Proposed Mitigation Measures

The proposed project intends to improve the existing infrastructure at Helene Hall, a County of Maui community center that is currently inoperable, because the wastewater system is past its useful service life. The proposed action will allow the public to utilize Helene Hall in a safe and sanitary manner. The proposed improvements are not anticipated to adversely alter the community character of Helene Hall, Hāna Town, or East Maui in general.

## 2. Population and Demography

### a. Existing Conditions

According to the 2020 U.S. Census, the population of Maui County was 164,754, an increase of 6.4 percent since 2010, when the County had a population of 154,834 (U.S. Census Bureau, 2020). It is noted, however, that population growth over the past decade has been uneven, with stronger growth in the early part of the decade. The U.S. Census Bureau’s annual population estimates data indicates that Maui County population grew steadily between 2010 and 2014, when annual population growth rates ranged from 1.2 percent to 1.3 percent. The estimated population in 2014 was 163,036.

According to the 2020 Census, the population within the Hāna Census County Division (CCD), which encompasses most of East Maui, is 2,719. Hāna town is the most densely populated area within this CCD. The median age within this CCD is 45.4, which is slightly older than the 41.7 median age of Maui County. About half of the people living here identify as Native Hawaiian, with White being the second most represented race. The employment rate here is 59.6 percent and the median household income is $56,339.00.

The State of Hawaiʻi, Department of Business Economic Development and Tourism (DBEDT) publishes population projections through 2045. According to the latest forecast, which was published in 2018, Maui County's population is expected to grow to 211,500 by 2045 (State of Hawaiʻi, DBEDT, 2018).

### b. Potential Impacts and Proposed Mitigation Measures

As the proposed project is limited to improvements to an existing facility-specific wastewater system in Hāna, it will not affect the current population of the region. The proposed action will improve Helene Hall's system operability and reliability.

## 3. Economy and Labor Force

### a. Existing Conditions

Hawaiʻi's economy through 2019 was strong, with record-setting visitor arrivals and low unemployment. However, the COVID-19 pandemic has had and will continue to have far reaching impacts on the economy on Maui, in Hawaiʻi, and across the nation and world. Stay-at-home regulations and travel regulations aimed to curb the spread of the COVID-19 virus in Hawaiʻi caused many businesses to shut down or drastically reduce operations. This caused unemployment rates in Maui County to peak at 33 percent in April 2020 compared to just 2.1 the previous month in March 2020. Now, approximately three (3) years after the onset of the pandemic, with vaccinations ongoing, and the tourism industry bouncing back, the unemployment rate in Maui County for September 2022 was 4.0 percent while statewide unemployment was 3.5 percent (Department of Labor and Industrial Relations, 2022).

#### b. Potential Impacts and Proposed Mitigation Measures

The proposed project consists of actions to rehabilitate the existing wastewater infrastructure at Helene Hall to improve system operability, reliability, and treated water quality. The proposed project will provide short-term construction-related employment and services. From a long-term perspective, the project will provide a more efficient and safe wastewater system at the Helene Hall facility for residents and visitors. The proposed action is not anticipated to adversely affect the overall economy for the Hāna region.

### 4. Housing

#### a. Existing Conditions

The U.S. Census Bureau reports that there were 71,553 housing units in Maui County in 2020, an increase of 1,061 units over the previous decade (U.S. Census Bureau, 2020). According to the American Community Survey 2019, there are 223 households in the Hāna region, with an average of 3.5 people per household (U.S. Bureau of Census, 2019).

Population and household growth have exceeded the development of new housing units, exacerbating the demand for housing and increasing housing costs. The Hawaiʻi Housing Planning Study, 2019 prepared by the State of Hawaiʻi, Housing Finance and Development Corporation projected a demand for 10,404 new units in Maui County from 2020 to 2025.

#### b. Potential Impacts and Mitigation Measures

The proposed Helene Hall Septic System Improvements project will not produce any housing units to address Maui County's housing shortfall. The proposed project is also not considered a population driver and is not anticipated to increase Maui County's housing shortfall. As such, no significant adverse impacts are expected as a result of the proposed project.

## C. PUBLIC SERVICES

### 1. Police and Fire Protection

#### a. Existing Conditions

The Maui Police Department has headquarters located at its Wailuku Station and provides services for Maui County throughout its six (6) patrol

districts. The patrol district in Hāna based out of the Hāna substation, is located near the intersection of Hāna Highway and Uakea Road, about a mile northwest of the project area.

Fire prevention, suppression, and protection services are provided by the County of Maui's Department of Fire and Public Safety. The department maintains a fire station in Hāna which is located adjacent to the police station.

### b. Potential Impacts and Proposed Mitigation Measures

The proposed project is not a population generator and will not extend the service area for the police or fire protection. The proposed project is not anticipated to adversely impact the existing level of police and fire protection services in the Hāna area.

## 2. Medical Facilities

### a. Existing Conditions

Maui Memorial Medical Center is the only major medical facility on the island. It is located approximately 50 miles from Hāna town. Acute, general, and emergency care services are provided by the approximately 214-bed facility.

In Hāna, the Hāna Health clinic is located about a mile northwest of the project site. Hāna Health is a Federally Qualified Health Center serving as the "safety net" provider for the medically underserved population of the remote Hāna District. Services are provided to all people regardless of their ability to pay. It is a 501(c)(3) private, nonprofit corporation. This facility provides a full range of primary health care services including but not limited to, general health care, dental services, and 24-hour acute care services.

### b. Potential Impacts and Proposed Mitigation Measures

The proposed project is not anticipated to adversely impact the existing level of medical services currently provided by the Maui Memorial Medical Center or Hāna Health. As such, no significant adverse effects are anticipated to existing medical facilities.

## 3. Educational Facilities

### a. Existing Conditions

The State of Hawaiʻi, Department of Education operates only one (1) public school in the region: Hāna High and Elementary School. Hāna High and Elementary School reported a total enrollment of approximately 370 students for the 2021-2022 school year (State of Hawaii, Department of Education, 2020).

The University of Hawaiʻi Maui College (UHMC), located in Kahului, is the primary higher education institution serving Maui and has a satellite campus located in Hāna.

### b. Potential Impacts and Mitigation Measures

The proposed project is not a direct population generator and, as such, is not anticipated to have an adverse impact on educational facilities in the region.

## 4. Recreational Facilities

### a. Existing Conditions

Diverse recreational opportunities are available in the Hāna region. Shoreline activities, such as fishing, surfing, camping, picnicking, snorkeling, and swimming, are predominant forms of recreation in the area. There are many places to hike as well.

Major recreational resources in the Hāna region include several County parks: Hāna Community Center and District Complex and Ball Park, Hāna Bay Beach Park, Helene Hall, and Paʻani Mai Park. In addition, the State of Hawaiʻi maintains the Waiʻānapanapa State Park located about three (3) miles from Helene Hall. The National Park Service maintains the ʻOheʻo Gulch Recreational area which is part of the Haleakalā National Park.

### b. Potential Impacts and Proposed Mitigation Measures

The proposed project intends to repair or replace existing infrastructure at Helene Hall. Because the septic system improvements will allow Helene Hall to be utilized at its intended capacity, the proposed project will have a positive effect on the recreational and community facility resources in the Hāna region.

The new treatment system and absorption field located at the Hāna Ball Park parking lot will primarily be underground. There will be a slight reduction in the open space available for parking on that parcel, however no significant adverse effect on the parking lot or nearby Ball Park is anticipated as a result of the proposed action.

### 5. Solid Waste Disposal

#### a. Existing Conditions

Solid waste at Helene Hall is collected by the County of Maui and transported to the Hāna Landfill for disposal. The Hāna Landfill is located approximately 2.9 miles from Helene Hall.

#### b. Potential Impacts and Proposed Mitigation Measures

No significant adverse impacts to the County's solid waste disposal capacity are anticipated as a result of the proposed action. Solid waste disposed at the County's Hāna Landfill facility would be minimal. The Department of Environmental Management, as the applicant for the proposed improvements to Helene Hall, will follow all applicable laws and utilize BMPs to reduce the amount of solid waste sent to the Hāna Landfill as much as practicable. All construction-related waste that is unable to be disposed of at the Hāna Landfill, will be disposed of appropriately.

## D. INFRASTRUCTURE

### 1. Roadways

#### a. Existing Conditions

The only road to Hāna is the Hāna Highway, also known as the Hāna Belt Road. It is a two-way and two-lane State Highway which serves as the main transportation arterial. The Hāna Highway is noted for its scenic beauty and historic nature, which includes 59 bridges and 15 culverts, all of which are over 50 years old. Hāna Highway (State Highway 360) runs from central Maui to Hāna town and is part of the State Route 36 through Pāʻia town. Hāna Highway turns into County Highway 31, or Piʻilani Highway beyond Hāna town. The Hāna Belt Road was designated in 1999 as a National Millennium Legacy Trail, and in June 2021, most of the highway was added to the National Register of Historic Places.

Keawa Place, a State roadway, is a two-way, two-lane road that intersects with Hāna Highway. Keawa Place provides access to Hāna Bay and Helene Hall and is the only public access road to these places. Uakea Road is a County owned two-way, two-lane road that intersects Keawa Place and provides access to the Hāna Ball Park.

**b. Potential Impacts and Mitigation Measures**

In the short term, the potential traffic impacts attributable to the project will occur along Keawa Place and Uakea Road. Keawa Place is the only roadway into Hāna Bay Beach Park, which is utilized by local residents and visitors. Uakea Road provides access to the Hāna Ball Park from both Keawa Place and Hāna Highway. A construction traffic control plan will be implemented to minimize disruption to the roadways and allow the public continued access to Hāna Bay and the Hāna Ball Park throughout construction.

## 2. Water System

**a. Existing Conditions**

The Hāna region is partly served by the County of Maui, Department of Water Supply (DWS). DWS has two (2) deep wells, one located at Hāmoa and one at Wākiu. These wells service the pipelines which go to Hāna Town. There is a 190,000-gallon reservoir that provides storage for the Hāmoa wells and a 500,000-gallon reservoir that provides storage for the Wākiu wells.

Helene Hall and the Hāna Ball Park parking lot are served by DWS waterlines.

**b. Potential Impacts and Mitigation Measures**

There are DWS lines that run beneath Keawa Place and Uakea Road. The project's contractor, once selected, will coordinate with the DWS prior to construction to ensure waterlines are not inadvertently damaged. As there are no water system improvements proposed as part of the project, implementation is not anticipated to adversely impact the County of Maui's water service capacity in the vicinity of the project area.

## 3. Wastewater System

### a. Existing Conditions

There is no County regional wastewater collection or treatment facilities currently serving the Hāna region. Individual properties are generally serviced by individual wastewater systems, including septic tanks, cesspools, and packaged treatment plants.

With respect to Helene Hall, the County owns and operates two (2) onsite aerobic treatment units (ATUs) and two (2) effluent disposal cesspools that are intended to provide wastewater treatment and disposal. The ATUs are currently not functioning as designed and are serving more as settling and holding tanks for wastewater before it is disposed of in cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week.

### b. Potential Impacts and Mitigation Measures

The proposed project will replace the existing wastewater system at Helene Hall and move the treatment system and absorption field mauka and away from Hāna Bay. A new 1.5 in. underground force main that runs approximately 1,500 feet along Keawa Place and Uakea Road will connect Helene Hall to the new treatment system and absorption field at the Hāna Ball Park parking lot. The improvements are anticipated to improve system operability, reliability, and treated water quality for Helene Hall. Once complete, Helene Hall will have an improved and more reliable wastewater system. No adverse impacts to the region's other wastewater facilities are anticipated.

## 4. Drainage System

### a. Existing Conditions

The approximate existing elevations at the treatment and disposal site at the Hāna Ball Park parking lot range between 65 and 63 feet above mean sea level (amsl). Existing site slopes are approximately two (2) percent and sheet flow northeast towards Uakea Road. Flows continue north along Uakea Road before discharging to an existing drainage ditch along Keawa Place.

The calculated total surface runoff from the existing site is 0.25 cubic feet per second (cfs) according to a drainage memo authored by Kennedy Jenks, the project engineers. See **Appendix "E"**.

**b. Potential Impacts and Mitigation Measures**

The proposed project is a wastewater system improvement at the Helene Hall community center. It will rehabilitate the existing system and move the treatment system and absorption field further mauka, away from Hāna Bay. Improvements are limited to the wastewater system and will not affect the existing drainage patterns. The drainage memo produced by Kennedy Jenks anticipates that the proposed drainage conditions will match the existing condition at 0.25 cfs. It is noted that there is no grading associated with the proposed improvements project. There is also no change in the anticipated runoff volume, the existing drainage pattern, or discharge point.

In addition, all improvements will conform to the MCC Title 20, Chapter 20.08, "Soil Erosion and Sedimentation Control" and the DPW Title MC-15 Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui" and Title MC-15, Chapter 111, "Rules for the Design of Storm Water Treatment Best Management Practices".

As such, no adverse impacts to downstream properties in terms of discharge form, quantity, and quality are anticipated as a result of the proposed project.

**5. Electrical, Telephone, and Cable Television Services**

**a. Existing Conditions**

Electrical, telephone, and cable television services for the Hāna region are provided by Hawaiian Electric Company, Hawaiian Telcom, and Spectrum, respectively. There are existing overhead lines running along Keawa Place and Uakea Road.

**b. Potential Impacts and Mitigation Measures**

The proposed project is not anticipated to impact existing utility poles or overhead electric, telephone, or cable lines. The proposed project is also not anticipated to adversely impact the existing level of electrical, telephone, or cable television services in the Hāna region.

## E. CUMULATIVE AND SECONDARY IMPACTS

Cumulative impacts are defined by Title 11, Chapter 200.1, Hawai‘i Administrative Rules (HAR), Environmental Impact Statement Rules as:

> *[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

A key element in understanding the requirement for assessing cumulative impacts, therefore, is the need to recognize what constitutes “reasonably foreseeable actions”.

The proposed action is a stand-alone and unique improvement to the Helene Hall wastewater treatment and disposal system. There are no other related infrastructure system upgrade projects in the region which would create impacts which may be considered to be of a cumulative nature.

Secondary impacts are those which have the potential to occur later in time or farther in distance, but are still reasonably foreseeable. They can be viewed as actions of others that are taken because of the presence of the project. Secondary impacts from highway projects, for example, can occur because they can induce development by removing one of the impediments to growth, such as transportation access.

With the proposed mitigation measures in place, the project is not anticipated to have secondary impacts. In the short term, construction of the project area will generate employment and revenues for the construction industry and related fields. Over the long term, the proposed project will support the wastewater needs for Helene Hall. It will revitalize the Helene Hall community facility, allowing the center to be a convenient and functional place for people to gather. In itself, the proposed action will not create a higher intensity of use of Helene Hall, as the facility is fixed in capacity and schedules for availability of use.

In summary, the proposed action is not anticipated to result in significant adverse secondary impacts.

# RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

# III

# III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

## A. STATE LAND USE DISTRICTS

Pursuant to Chapter 205, Hawai‘i Revised Statutes (HRS), all lands in the State have been placed into one (1) of four (4) major land use districts by the State Land Use Commission. These land use districts are designated “Urban”, “Rural”, “Agricultural”, and “Conservation”. The project site is located within the “Urban” district. See **Figure 11**. Pursuant to Chapter 205, Hawai‘i Revised Statutes (HRS), the “Urban” districts shall include uses or activities provided by ordinances or regulations of the County in which the “Urban” district is located. **Section F** below, outlines the County of Maui’s zoning regulations that are applicable to the proposed project. The proposed project is consistent with the “Urban” district designation.

## B. HAWAI‘I STATE PLAN

Chapter 226, HRS, also known as the Hawai‘i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-term development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The Plan consists of three (3) parts. Part I includes the Overall Theme, Goals, Objectives, and Policies; Part II includes Planning, Coordination, and Implementation; and Part III establishes Priority Guidelines. Part II of the State Plan covers its administrative structure and implementation process.

The overall theme of the Hawai‘i State Plan is governed by the following general principles.

1. Individual and family self-sufficiency

2. Social and economic mobility

3. Community or social well-being

In consonance with the foregoing principles, the Hawai‘i State Plan identifies three (3) clarifying goals:

1. A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai‘i's present and future generations.

2. A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.

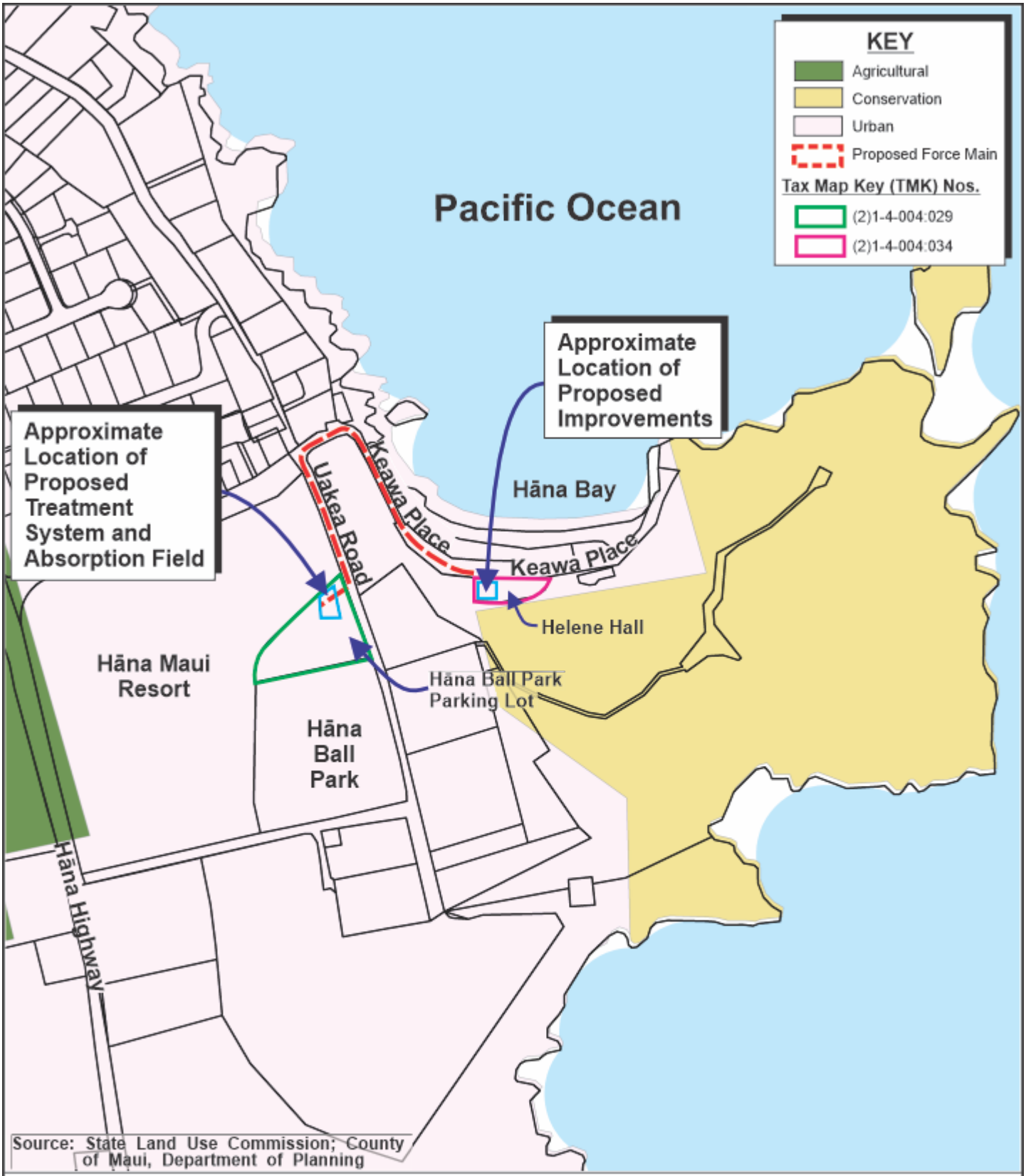



Figure 11 Proposed Helene Hall Septic System Improvements
State Land Use Designation Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

MUNEKIYO HIRAGA

Kennedy Jenks\Helene Hall WW Upgrade\Applications\Figures\SLUD

3. Physical, social, and economic well-being, for individuals and families in Hawai‘i, that nourishes a sense of community responsibility, of caring, and of participation in community life.

This section of the environmental assessment examines the applicability of the proposed action as it relates to the objectives, policies, and priority guidelines of the Hawai‘i State Plan, as set forth in HRS Sections 226-5 through 226-27.

The table below summarizes the relationship between the proposed action and the goals of the Hawai‘i State Plan. The relationship between the action and the goals are categorized into the following groups. More detailed analysis and discussion, including the methodology used, is presented in **Appendix "F-1"**.

1. **Directly applicable**: the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

2. **Indirectly applicable**: the action and its potential effects indirectly supports or advances the objective, policy or priority guideline.

3. **Not applicable**: the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Hawai‘i State Plan.

In general, a proposed action's applicability to the objectives, policies and priority guidelines of the Hawai`i State Plan is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions. The analysis presented in **Table 1** and summarized below focuses on key elements of the proposed action's relationship to the Hawai‘i State Plan. Detailed discussion on the applicability of the proposed action to each goal and related objectives, policies, and implementing actions of the Hawai‘i State Plan is provided in **Appendix "F-1"**.

**Table 1.** Hawai‘i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies (HRS 226 to 227)

| **Hawai‘i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies**<br>**Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable** | **DA** | **IA** | **NA** |
|---|---|---|---|
| **HRS 226-1: Findings and Purpose** | | | |
| **HRS 226-2: Definitions** | | | |
| **HRS 226-3: Overall Theme** | | | |
| **HRS 226-4: State Goals**. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:<br>(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.<br>(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.<br>(3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life. | | | |
| **Chapter 226-5 Objective and Policies for Population** | | | |
| **Objective:** It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter. | | ✓ | |
| **Chapter 226-6 Objectives and policies for the economy – – in general** | | | |
| **Objectives:** Planning for the State's economy in general shall be directed toward achievement of the following objectives: | | | |
| (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited. | | ✓ | |
| (2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands. | | ✓ | |
| **Chapter 226-7 Objectives and policies for the economy – – agriculture.** | | | |
| **Objectives:** Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives: | | | |
| (1) Viability of Hawaii's sugar and pineapple industries. | | | ✓ |
| (2) Growth and development of diversified agriculture throughout the State. | | | ✓ |
| (3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being. | | | ✓ |
| **Chapter 226-8 Objective and policies for the economy – – visitor industry.** | | | |
| **Objective:** Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy. | | | ✓ |

| Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable,<br>NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **Chapter 226-9 Objective and policies for the economy – – federal expenditures.** | | | |
| **Objective:** Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy. | | | ✓ |
| **Chapter 226-10 Objective and policies for the economy – – potential growth and innovative activities.** | | | |
| **Objective:** Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii's economic base. | | | ✓ |
| **Chapter 226-10.5 Objectives and policies for the economy – – information industry.** | | | |
| **Objective:** Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region. | | | ✓ |
| **Chapter 226-11 Objectives and policies for the physical environment – – land based, shoreline, and marine resources.** | | | |
| **Objectives:** Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives: | | | |
| (1) Prudent use of Hawaii's land-based, shoreline, and marine resources. | | ✓ | |
| (2) Effective protection of Hawaii's unique and fragile environmental resources. | | ✓ | |
| **Chapter 226-12 Objective and policies for the physical environment – – scenic, natural beauty, and historic resources.** | | | |
| **Objective:** Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources. | | ✓ | |
| **Chapter 226-13 Objectives and policies for the physical environment – – land, air, and water quality.** | | | |
| **Objectives:** Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives. | | | |
| (1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources. | | ✓ | |
| (2) Greater public awareness and appreciation of Hawaii's environmental resources. | | ✓ | |
| **Chapter 226-14 Objective and policies for facility systems – – in general.** | | | |
| **Objective:** Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. | ✓ | | |

| Hawai‘i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable,<br>NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **Chapter 226-15 Objectives and policies for facility systems – – solid and liquid waste.** | | | |
| **Objectives:** Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives: | | | |
| (1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes. | ✓ | | |
| (2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas. | ✓ | | |
| **Chapter 226-16 Objective and policies for facility systems – – water.** | | | |
| **Objective:** Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities. | | | ✓ |
| **Chapter 226-17 Objectives and policies for facility systems – – transportation.** | | | |
| **Objectives:** Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives: | | | |
| (1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods. | | | ✓ |
| (2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State. | | | ✓ |
| **Chapter 226-18 Objectives and policies for facility systems – – energy.** | | | |
| **Objectives:** Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all: | | | |
| (1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people; | | | ✓ |
| (2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation. | | | ✓ |
| (3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems; | | | ✓ |
| (4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and | | | ✓ |
| (5) Utility models that make the social and financial interests of Hawaii's utility customers a priority. | | | ✓ |
| **Chapter 226-18.5 Objectives and policies for facility systems – – telecommunications.** | | | |
| **Objectives:** Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people. | | | ✓ |
| **Chapter 226-19 Objectives and policies for socio-cultural advancement – – housing.** | | | |
| **Objectives:** Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives: | | | |

| Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable,<br>NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| (1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population. | | | ✓ |
| (2) The orderly development of residential areas sensitive to community needs and other land uses. | | | ✓ |
| (3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people. | | | ✓ |
| **Chapter 226-20 Objectives and policies for socio-cultural advancement – – health.** | | | |
| **Objectives:** Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives: | | | |
| (1) Fulfillment of basic individual health needs of the general public. | | ✓ | |
| (2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities. | ✓ | | |
| (3) Elimination of health disparities by identifying and addressing social determinants of health. | | | ✓ |
| **Chapter 226-21 Objectives and policies for Socio-cultural advancement – – education.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations. | | | ✓ |
| **Chapter 226-22 Objective and policies for socio-cultural advancement – – social services.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being. | | | ✓ |
| **Chapter 226-23 Objective and policies for socio-cultural advancement – – leisure.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations. | ✓ | | |
| **Chapter 226-24 Objective and policies for socio-cultural advancement – – individual rights and personal well-being.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. | | | ✓ |

| Hawai‘i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable,<br>NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **Chapter 226-25 Objective and policies for socio-cultural advancement – – culture.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people. | | ✓ | |
| **Chapter 226-26 Objectives and policies for socio-cultural advancement – – public safety.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives: | | | |
| (1) Assurance of public safety and adequate protection of life and property for all people. | | | ✓ |
| (2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances. | | | ✓ |
| (3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people. | | | ✓ |
| **Chapter 226-27 Objectives and policies for socio-cultural advancement – – government.** | | | |
| **Objectives:** Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives: | | | |
| (1) Efficient, effective, and responsive government services at all levels in the State. | ✓ | | |
| (2) Fiscal integrity, responsibility, and efficiency in the state government and county governments. | ✓ | | |

The Helene Hall Septic System Improvements project is directly applicable to several of the goals and objectives of HRS 226. In particular, it applies to the overall goal of maintaining facility systems, especially as it relates to solid and liquid waste. The wastewater system at Helene Hall has been in disrepair and the public has not been able to fully utilize the facility due to the poor condition of the wastewater system. These upgrades will ensure the community facility has functioning restrooms and kitchen areas. Helene Hall is also situated in close proximity to Hāna Bay. This project will help to minimize and mitigate the risk of a possible sewage spill or leakage into the Pacific Ocean. The proposed action is also directly applicable to the socio-cultural advancement of health and leisure. With a new wastewater treatment and disposal system, Helene Hall will be available for civic, cultural, and recreational events where the community can gather safely, contributing to their health and overall well-being. The Helene Hall Septic System Improvements project also is a direct demonstration of an efficient and responsive government as it is maintaining and improving a public facility.

Further, the proposed action is indirectly applicable to HRS 226 as it relates to the overall objectives for population, the physical environment, and socio-cultural advancement of

culture. The improvements to the wastewater system at Helene Hall will have an indirect benefit to these goals and objectives because it will improve access to and utility of a key public facility in the Hāna region.

**Priority Guidelines**

"Priority guidelines" means those guidelines which shall take precedence when addressing areas of statewide concern. This section addresses applicability criteria to the priority guidelines set forth in HRS 226-103.

Priority guidelines of the Hawai'i State Plan covers the economy, population growth and land resources, crime and criminal justice, affordable housing, quality education, sustainability, and climate change adaptation.

**Table 2** below summarizes the relationship between the proposed action and the priority guidelines of the Hawai'i State Plan. More detailed discussion is presented in **Appendix "F-1"**.

**Table 2.** Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies (HRS 226-101 to 226-109)

| **Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies**<br>**Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable** | DA | **IA** | **N/A** |
|---|---|---|---|
| **Chapter 226-101: Purpose.** The purpose of this part is to establish overall priority guidelines to address areas of statewide concern. | | | |
| **Chapter 226-102: Overall direction.** The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation. | | | |
| **Chapter 226-103: Economic priority guidelines.** | | | |
| **(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy** | | | ✓ |
| **(b) Priority guidelines to promote the economic health and quality of the visitor industry** | | | ✓ |
| **(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries** | | | ✓ |
| **(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture** | | | ✓ |
| **(e) Priority guidelines for water use and development** | | | ✓ |
| **(f) Priority guidelines for energy use and development** | | | ✓ |
| **(g) Priority guidelines to promote the development of the information industry** | | | ✓ |
| **Chapter 226-104: Population growth and land resources priority guidelines.** | | | |
| **(a) Priority guidelines to effect desired statewide growth and distribution** | | | ✓ |
| **(b) Priority guidelines for regional growth distribution and land resource utilization** | | ✓ | |

| Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable,<br>NA = Not Applicable | DA | IA | N/A |
|---|---|---|---|
| **Chapter 226-105: Crime and criminal justice.** | | | |
| **Priority guidelines in the area of crime and criminal justice** | | | ✓ |
| **Chapter 226-106: Affordable housing.** | | | |
| **Priority guidelines for the provision of affordable housing** | | | ✓ |
| **Chapter 226-107: Quality education.** | | | |
| **Priority guidelines to promote quality education** | | | ✓ |
| **CHAPTER 226-108: Sustainability** | | | |
| **Priority guidelines and principles to promote sustainability shall include** | | | ✓ |
| **CHAPTER 226-109: Climate change adaptation** | | | |
| **Priority guidelines and principles to promote climate change adaptation shall include** | | ✓ | |

The proposed wastewater treatment system upgrades project are indirectly applicable to the land resource utilization priority guidelines set forth in HRS 226-104. The wastewater treatment system and absorption field will be located offsite at a portion of the Hāna Ball Park parking lot approximately 0.25 mile from the shoreline in order to protect the nearshore marine environment. Additionally, the proposed project is also indirectly applicable to the climate change adaptation priority guidelines. A sea level rise analysis was carried out (please refer to Chapter II of this Final EA). As noted, Helene Hall and Keawa Place are closest to the ocean, and are beyond the affected area of the 3.2-ft. sea level rise exposure area. The treatment system and absorption field are located further mauka at the Hāna Ball Park.

## C. STATE FUNCTIONAL PLAN

A key element of the Statewide Planning System is the Functional Plans which set forth the policies, statewide guidelines, and priorities within a specific field of activity. There are 13 Functional Plans which have been developed by the State agency primarily responsible for a given functional area. Together with the County General Plans, the State Functional Plans establish more specific strategies for implementation. In particular, State Functional Plans provide for the following:

- Identify major Statewide priority concerns
- Define current strategies for each functional area
- Identify major relationships among functional areas
- Provide direction and strategies for departmental policies, programs, and priorities

- Provide a guide for the allocation of resources
- Coordinate State and County roles and responsibilities in the implementation of the Hawai‘i State Plan

Thirteen (13) Functional Plans have been prepared by State agencies. **Table 3** provides an assessment of the relationship between the proposed action and each of the 13 Functional Plans.

**Table 3**. Relationship Between the Proposed Helene Hall Septic System Improvements Project and the State Functional Plans

| | State Functional Plan | State Coordinating Agency | Purpose | Analysis |
|---|---|---|---|---|
| 1 | Agriculture Functional Plan (1991) | Department of Agriculture | Continued viability of agriculture throughout the State | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the State Agricultural Functional Plan. |
| 2 | Conservation Lands State Functional Plan (1991) | Department of Land and Natural Resources | Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry | The proposed upgrades to the Helene Hall septic system is indirectly applicable to the Conservation Lands State Functional Plan. The proposed wastewater treatment system and absorption field were relocated offsite to the Hāna Ball Park parking lot, approximately 0.25 mile upslope, to mitigate any adverse impacts on the nearshore marine environment. This action protects lands and shorelines from the current underperforming conditions of the ATU system. |
| 3 | Education State Functional Plan (1989) | Department of Education | Improvements to Hawai‘i’s educational curriculum, quality of educational staff, and access to adequate facilities | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Education State Functional Plan. |
| 4 | Employment State Functional Plan (1990) | Department of Labor and Industrial Relations | Improve the qualifications, productivity, and effectiveness of the State’s workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Employment State Functional Plan. |

**Table 3. (Continued)** Relationship Between the Proposed Helene Hall Septic System Improvements Project and the State Functional Plans

| | State Functional Plan | State Coordinating Agency | Purpose | Analysis |
|---|---|---|---|---|
| 5 | Energy State Functional Plan (1991) | Department of Business, Economic Development and Tourism | Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Energy State Functional Plan. |
| 6 | Health State Functional Plan (1989) | Department of Health | Improve health care system by providing for those who don't have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Health State Functional Plan. |
| 7 | Higher Education Functional Plan (1984) | University of Hawaii | Prepare Hawaii's citizens for the demands of an increasingly complex world through providing technical and intellectual tools | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Higher Education State Functional Plan. |
| 8 | Historic Preservation State Functional Plan (1991) | Department of Land and Natural Resources | Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawai'i | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is indirectly applicable to the Historic Preservation State Functional Plan. An Archaeological Field Inspection and Cultural Impact Assessment were carried out for the proposed project to ensure historic and cultural resources will be preserved and protected, as applicable. |
| 9 | Housing State Functional Plan (1989) | Hawaii Housing Finance and Development Corporation | Provide affordable rental and for-sale housing; increase homeownership and amount of rental housing units; acquiring public and privately-owned lands for future residential development; maintain a statewide housing data system | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Housing State Functional Plan. |

**Table 3. (Continued)** Relationship Between the Proposed Helene Hall Septic System Improvements Project and the State Functional Plans

| | State Functional Plan | State Coordinating Agency | Purpose | Analysis |
|---|---|---|---|---|
| 10 | Human Services State Functional Plan (1989) | Department of Human Services | Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency' | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Human Services State Functional Plan. |
| 11 | Recreation State Functional Plan (1991) | Department of Land and Natural Resources | Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation opportunities, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is directly applicable to the Recreation State Functional Plan. The proposed project will ensure County recreational and community facilities meet sanitary and health standards and are well maintained for current and future generations. |
| 12 | Tourism State Functional Plan (1991) | Department of Business, Economic Development and Tourism | Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Tourism State Functional Plan. |
| 13 | Transportation State Functional Plan (1991) | Department of Transportation | Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility and infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand | The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the Transportation State Functional Plan. |

## D. GENERAL PLAN OF THE COUNTY OF MAUI

As indicated by the Maui County Charter, the purpose of the general plan shall be to:

> *... indicate desired population and physical development patterns for each island and region within the county; shall address the unique problems and needs of each island and region; shall explain opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density, land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.*

Chapter 2.80B of the Maui County Code, relating to the General Plan and Community Plans, implements the foregoing Charter provision through enabling legislation which calls for a Countywide Policy Plan and a Maui Island Plan.

### 1. Countywide Policy Plan

The Countywide Policy Plan was adopted in March 2010 and is a comprehensive policy document for the islands of Maui County to the year 2030. The plan replaces the General Plan of the County of Maui 1990 Update and provides the policy framework for the development of the Maui Island Plan as well as for updating the nine (9) detailed Community Plans. The Countywide Policy Plan provides broad goals, objectives, policies and implementing actions that portray the desired direction of the County's future. Goals are intended to describe a desirable condition of the County by the year 2030 and are intentionally general. Objectives tend to be more specific and may be regarded as milestones to achieve the larger goals. Policies are not intended as regulations, but instead provide a general guideline for County decision makers, departments, and collaborating organizations toward the attainment of goals and objectives. Implementing actions are specific tasks, procedures, programs, or techniques that carry out policy.

**Table 4** below summarizes the relationship between the proposed action and the 11 goals of the Countywide Policy Plan. The relationship between the action and the goals are categorized into the following groups. More detailed analysis and discussion, including the methodology used, is presented in **Appendix "F-2"**.

1. **Directly applicable:** the action and its potential effects directly advances, promotes or affects the relevant goal, objective, or policy.

2. **Indirectly applicable:** the action and its potential effects indirectly supports, advances or affects the objective, policy or priority guideline.

3. **Not applicable:** the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Countywide Policy Plan.

In general, a proposed action's applicability to the goals, objectives, policies and implementing actions of the Countywide Policy Plan is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions. The analysis presented in **Table 4** and summarized below focuses on key elements of the proposed action's relationship to the Countywide Policy Plan. Detailed discussion on the applicability of the proposed action to each goal and related objectives, policies, and implementing actions of the Countywide Policy Plan is provided in **Appendix "F-2"**.

**Table 4.** Countywide Policy Plan

| COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **A. PROTECT THE NATURAL ENVIRONMENT** | | | |
| **Goal:** Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity. | | ✓ | |
| **B. PRESERVE LOCAL CULTURES AND TRADITIONS** | | | |
| **Goal:** Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents" multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage. | | ✓ | |
| **C. IMPROVE EDUCATION** | | | |
| **Goal:** Residents will have access to lifelong formal and informal educational options enabling them to realize their ambitions. | | | ✓ |
| **D. STRENGTHEN SOCIAL AND HEALTHCARE SERVICES** | | | |
| **Goal:** Health and social services in Maui County will fully and comprehensively serve all segments of the population. | | | ✓ |
| **E. EXPAND HOUSING OPPORTUNITIES FOR RESIDENTS** | | | |
| **Goal:** Quality, island-appropriate housing will be available to all residents. | | | ✓ |
| **F. STRENGTHEN THE LOCAL ECONOMY** | | | |
| **Goal:** Maui County's economy will be diverse, sustainable, and supportive of community values. | | | ✓ |
| **G. IMPROVE PARKS AND PUBLIC FACILITIES** | | | |
| **Goal:** A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors. | ✓ | | |

| COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **H. DIVERSIFY TRANSPORTATION OPTIONS** | | | |
| **Goal:** Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods. | | | ✓ |
| **I. IMPROVE PHYSICAL INFRASTRUCTURE** | | | |
| **Goal:** Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies. | ✓ | | |
| **J. PROMOTE SUSTAINABLE LAND USE AND GROWTH MANAGEMENT** | | | |
| **Goal:** Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner. | | ✓ | |
| **K. STRIVE FOR GOOD GOVERNANCE** | | | |
| **Goal:** Government services will be transparent, effective, efficient, and responsive to the needs of residents. | ✓ | | |
| **L. MITIGATE CLIMATE CHANGE AND WORK TOWARD RESILIENCE** | | | |
| **Goal:** Minimize the causes and negative effects of climate change. | | ✓ | |

The proposed Helene Hall Septic System Improvements Project is directly applicable to the goals of the Countywide Policy Plan as it relates to the improvement of parks and public facilities, physical infrastructure, and good governance. The proposed action will allow the community to enjoy the Helene Hall Community Center as it will have a functioning kitchen and restrooms. The DEM also met with the Hāna community through Town Hall meetings regarding the project. This allowed for dialogue between residents and government, thereby supporting good governance. As a wastewater improvements initiative, this project will also directly improve the County's physical infrastructure to serve the needs of the people. Further, by improving and maintaining a public facility, the County of Maui is being responsive to the needs of its residents.

The proposed action is also indirectly applicable to the goals and objectives of the Countywide Policy Plan for protecting the natural environment, preserving local cultures and traditions, and promoting sustainable land use and growth management. The improvements to the existing system and moving the treatment and disposal elements further mauka, away from ocean, will support the goal of protecting the natural environment. Capacity and efficiency of the septic system will be increased to accommodate use and thus, mitigating any potential wastewater spill. Helene Hall will be able to be utilized to its full capacity which will indirectly support local traditions because people will be able to hold social gatherings further perpetuating cultural and local traditions. The relocation of the absorption field and treatment system to the Hāna Ball Park parking lot will also benefit the goal of sustainable land use. Overall, the Hāna community's character,

lifestyle, and natural asset will be improved with the safe and restored use of its community center.

## 2. Maui Island Plan

The Maui Island Plan (MIP) is applicable to the island of Maui only, providing more specific policy-based strategies for population, land use, transportation, public and community facilities, water and wastewater systems, visitor destinations, urban design, and other matters related to future growth.

As provided by Chapter 2.80B, the MIP shall include the following components:

1. *An island-wide land use strategy, including a managed and directed growth plan*
2. *A water element assessing supply, demand and quality parameters*
3. *A nearshore ecosystem element assessing nearshore waters and requirements for preservation and restoration*
4. *An implementation program which addresses the County's 20-year capital improvement requirements, financial program for implementation, and action implementation schedule*
5. *Milestone indicators designed to measure implementation progress of the MIP*

The MIP addresses a number of planning categories with detailed policy analysis and recommendations which are framed in terms of goals, objectives, policies and implementing actions. These planning categories address the following areas:

1. *Population*
2. *Heritage Resources*
3. *Natural Hazards*
4. *Economic Development*
5. *Housing*
6. *Infrastructure and Public Facilities*
7. *Land Use*

Additionally, an essential element of the MIP is its directed growth plan which provides a management framework for future growth in a manner that is fiscally, environmentally, and culturally prudent. Among the directed growth management tools developed through the MIP process are maps delineating urban growth

boundaries (UGB), small town boundaries (STB) and rural growth boundaries (RGB). The respective boundaries identify areas appropriate for future growth and their corresponding intent with respect to development character.

The proposed project is located within the STB of the MIP. In this regard, it is consistent with the directed growth strategy defined via growth maps adopted in the MIP. See **Figure 12**.

**Table 5** below summarizes the relationship between the proposed action and the goals of the MIP. The relationship between the action and the goals are categorized into the following groups. More detailed analysis and discussion, including the methodology used, is presented in **Appendix "F-3"**.

1. **Directly applicable:** the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

2. **Indirectly applicable:** the action's potential effects indirectly supports or advances the objective, policy or priority guideline.

3. **Not applicable:** The action and its potential effects have no direct or indirect relationship to the objectives and policies of the Maui Island Plan.

In general, a proposed action's applicability to the MIP is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions. The analysis presented in **Table 5** and summarized below focuses on key elements of the proposed action's relationship to the MIP. Detailed discussion on the applicability of the proposed action to each goal and related objectives, policies, and implementing actions of the MIP is provided in **Appendix "F-3"**.

**Table 5. Maui Island Plan**

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **CHAPTER 1 – POPULATION** | | | |
| 1.1 Maui's people, values, and lifestyles thrive through strong, healthy, and vibrant island communities. | | ✓ | |
| **CHAPTER 2 – HERITAGE RESOURCES** | | | |
| **CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES ISSUES** | | | |
| 2.1 Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions. | | ✓ | |

Source: County of Maui, Department of Planning

Figure 12 Proposed Helene Hall Septic System Improvements
Maui Island Plan Map

NOT TO SCALE

Prepared for: County of Maui, Department of Environmental Management

MUNEKIYO HIRAGA

Kennedy Jenks\Helene Hall WW Upgrade\Applications\Figures\MIP

**Table 5.** Maui Island Plan (continued)

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **SHORELINE, REEFS, AND NEARSHORE WATERS** | | | |
| 2.2 An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity. | | ✓ | |
| **WATERSHEDS, STREAMS, AND WETLANDS ISSUES** | | | |
| 2.3 Healthy watersheds, streams, and riparian environments. | | ✓ | |
| **WILDLIFE AND NATURAL AREAS** | | | |
| 2.4 Maui's natural areas and indigenous flora and fauna will be protected. | | ✓ | |
| **SCENIC RESOURCES** | | | |
| 2.5 Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents' quality of life, attract visitors, provide a connection to the past, and promote a sense of place. | | ✓ | |
| **CHAPTER 3 – NATURAL HAZARDS** | | | |
| 3.1 Maui will be disaster resilient. | | ✓ | |
| **CHAPTER 4 – ECONOMIC DEVELOPMENT** | | | |
| **ECONOMIC DIVERSIFICATION** | | | |
| 4.1 Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island's unique natural and cultural resources. | | | ✓ |
| **TOURISM** | | | |
| 4.2 A healthy visitor industry that provides economic well-being with stable and diverse employment opportunities. | | | ✓ |
| **AGRICULTURE** | | | |
| 4.3 Maui will have a diversified agricultural industry contributing to greater economic, food, and energy security and prosperity. | | | ✓ |
| **EMERGING SECTORS** | | | |
| 4.4 A diverse array of emerging economic sectors. | | | ✓ |
| **SMALL BUSINESS DEVELOPMENT** | | | |
| 4.5 Small businesses will play a key role in Maui's economy. | | | ✓ |
| **HEALTH CARE SECTOR** | | | |
| 4.6 Maui will have a health care industry and options that broaden career opportunities that are reliable, efficient, and provide social well-being. | | | ✓ |
| **EDUCATION AND WORKFORCE DEVELOPMENT** | | | |
| 4.7 Maui will have effective education and workforce development programs and initiatives that are aligned with economic development goals. | | | ✓ |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **CHAPTER 5 – HOUSING** | | | |
| 5.1 Maui will have safe, decent, appropriate, and affordable housing for all residents developed in a way that contributes to strong neighborhoods and a thriving island community. | | | ✓ |
| **CHAPTER 6 – INFRASTRUCTURE AND PUBLIC FACILITES** | | | |
| **SOLID WASTE** | | | |
| 6.1 Maui will have implemented the ISWMP thereby diverting waste from its landfills, extending their capacities. | | | ✓ |
| **WASTEWATER** | | | |
| 6.2 Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible. | ✓ | | |
| **WATER** | | | |
| 6.3 Maui will have an environmentally sustainable, reliable, safe, and efficient water system. | | | ✓ |
| **TRANSPORTATION** | | | |
| 6.4 An interconnected, efficient, and well-maintained, multimodal transportation system. | | | ✓ |
| **TRANSIT** | | | |
| 6.5 An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities. | | | ✓ |
| **PARKS** | | | |
| 6.6 Maui will have a diverse range of active and passive recreational parks, wilderness areas, and other natural-resource areas linked, where feasible, by a network of greenways, bikeways, pathways, and roads that are accessible to all. | | | ✓ |
| **PUBLIC FACILITIES** | | | |
| 6.7 Maui will have adequate public facilities that meet the diverse needs of residents. | ✓ | | |
| **SCHOOLS AND LIBRARIES** | | | |
| 6.8 Maui will have school and library facilities that meet residents' needs and goals. | | | ✓ |
| **HEALTH CARE** | | | |
| 6.9 All of Maui residents will have the best possible health care to include healthy living, disease prevention, as well as acute and long-term care. | | | ✓ |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **ENERGY** | | | |
| 6.10 Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation. | | | ✓ |
| **HARBORS AND AIRPORT** | | | |
| 6.11 Maui will have harbors and airports that will efficiently, dependably, and safely facilitate the movement of passengers and cargo. | | | ✓ |
| **CHAPTER 7 – LAND USE** | | | |
| **AGRICULTURAL LANDS** | | | |
| 7.1 Maui will have a prosperous agricultural industry and will protect agricultural lands. | | | ✓ |
| **RURAL AREAS** | | | |
| 7.2 Maui will have a rural landscape and lifestyle where natural systems, cultural resources and farm lands are protected and development enhances and compliments the viability and character of rural communities. | | | ✓ |
| **URBAN AREAS** | | | |
| 7.3 Maui will have livable human-scale urban communities, an efficient and sustainable land use pattern, and sufficient housing and services for Maui residents. | | | ✓ |
| **CHAPTER 8 – DIRECTED GROWTH PLAN** | | | |
| **URBAN AND SMALL TOWN GROWTH AREA** | | | |
| 8.1 Maui will have well-serviced, complete, and vibrant urban communities and traditional small towns through sound planning and clearly defined development expectations. | | ✓ | |
| **RURAL GROWTH AREA** | | | |
| 8.2 Maui will maintain opportunities for agriculture and rural communities through sound planning and clearly defined development expectations. | | | ✓ |

The proposed project involves wastewater treatment and disposal system upgrades at Helene Hall and is directly applicable to the goals, objectives, and policies related to wastewater and the adequate provision of public facilities to meet community needs. The proposed project will provide treatment of wastewater at Helene Hall and its commercial kitchen to meet or exceed United States Federal Government (Federal) and State of Hawai‘i (State) standards. The proposed project will phase out use of the existing cesspool and relocate the wastewater treatment system and absorption field outside the tsunami inundation zone. This will directly improve the operational integrity of Helene Hall, a community center for the people of Hāna.

Indirectly, the proposed project will meet several of the goals, objectives, and policies of the Maui Island Plan, especially those related to population, heritage resources, natural hazards, and urban and small town growth area. As a wastewater improvement project to a community center, the public will indirectly benefit because it will allow the safe use of a facility for family, cultural, community and government events. More so, cultural and natural resources will be further protected from any inadvertent wastewater spill that could possibly contaminate the ocean or natural surroundings.

## E. HANA COMMUNITY PLAN

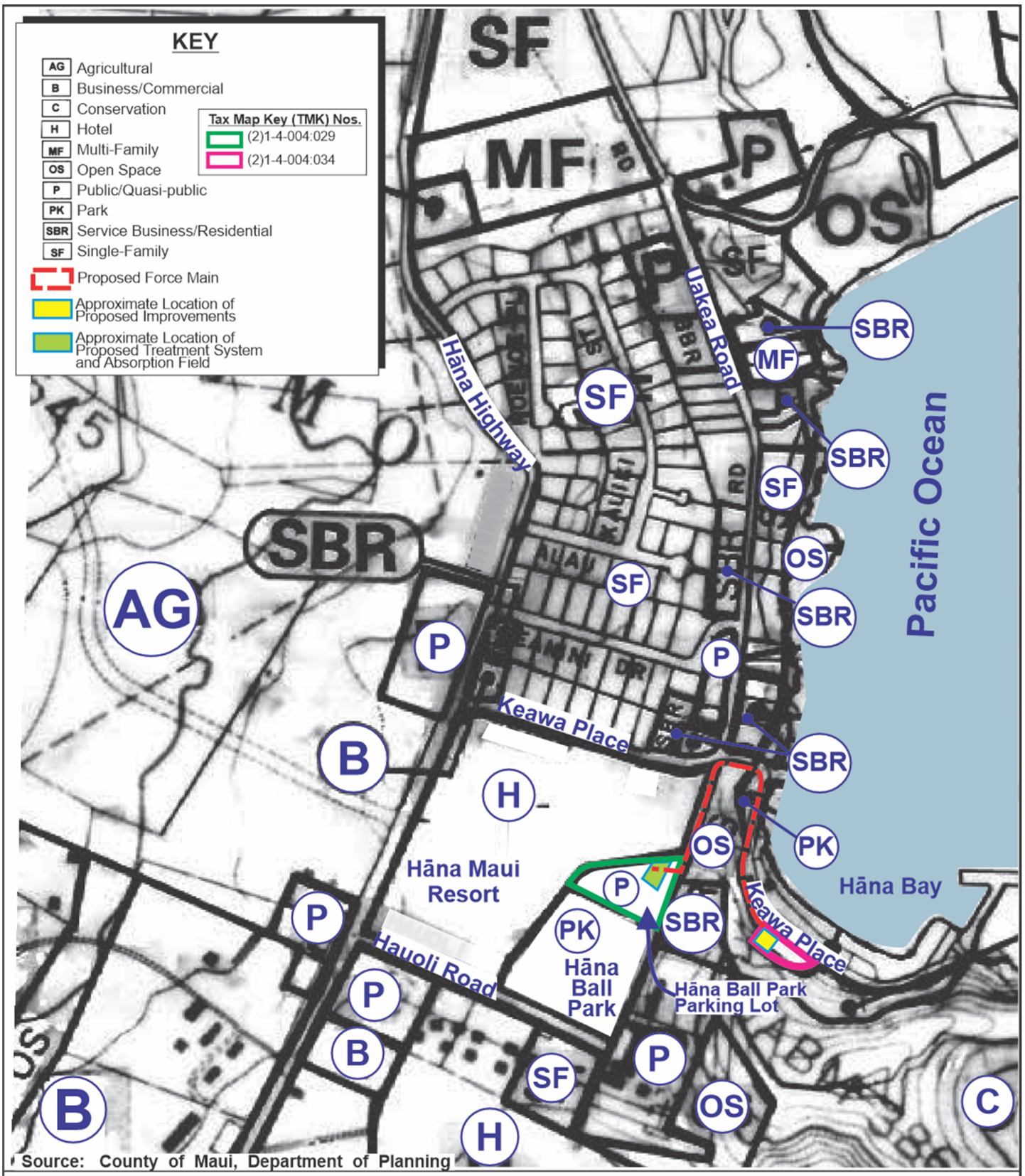
Within Maui County, there are nine (9) community plan regions. From a General Plan implementation standpoint, each region is governed by a Community Plan which sets forth desired land use patterns, as well as goals, objectives, policies, and implementing actions for a number of functional areas, including infrastructure-related parameters. The project site is located within the Hana Community Plan region.

Land use guidelines are set forth by the Hana Community Plan Land Use Map. As shown in **Figure 13**, Helene Hall falls within the Park (PK) land use designation of the Community Plan, while the portion of the Hāna Ball Park proposed for the treatment and absorption field components is designated "Public/Quasi-Public" (P).

The Park designation applies to lands developed or to be developed for recreational use. This includes all public and private active and passive parks. Helene Hall is an integral component of the County's Hāna Beach Park. As such, the proposed action of upgrading the wastewater system for Helene Hall is consistent with the Hana Community Plan's Park land use designation.

The Community Plan's Public/Quasi-Public designation addresses schools, libraries, fire/police stations, government buildings, public utilities, hospitals, churches, cemeteries, and community centers. As an offsite component of Helene Hall's wastewater system proposed by the County of Maui, the treatment and absorption field components of the project are consistent with the Hana Community Plan.

In addition to land use considerations, the Hana Community Plan addresses pertinent community-based goals, objectives and policies. An assessment of relevant goals, objectives and policies is provided.




Source: County of Maui, Department of Planning

Figure 13 Proposed Helene Hall Septic System Improvements

Hana Community Plan Map

NOT TO SCALE

Prepared for: County of Maui, Department of Environmental Management

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## ENVIRONMENT

### Goal

*Protection and management of Hāna's land, water and ocean resources to ensure that future generations can enjoy the region's exceptional environmental qualities.*

### Objectives and Policies

- *Protect, preserve and increase the Hana region's natural marine, coastal and inland resources, encouraging comprehensive resource management programs.*
- *Recognize residents' traditional uses of the region's natural resources which balance environmental protection and self-sufficiency.*

**Response:** The proposed action is designed to improve an existing wastewater system at Helene Hall which is not in proper working order. Such a circumstance not only limits the functional utility of Helene Hall, but also provides a threat to surrounding environs should the technical inadequacies of the existing system result in spillage or leakage to nearby park lands and marine waters. The proposed action includes relocating system components to mauka lands which helps ensure that future generations can enjoy the region's exceptional environmental qualities.

## CULTURAL RESOURCES

### Goal

*Identification, preservation, protection, and where appropriate, restoration of significant cultural resources and practices, that provide a sense of history and identity for the Hāna region.*

### Objectives and Policies

- *Identify, preserve and protect historically, archaeologically and culturally significant areas, sites, and features within the Hana District.*
- *Acknowledge and respect family ancestral ties to cultural resources.*

**Response**: As part of the Chapter 343, HRS process, an Archaeological Literature Review and Field Inspection and Cultural Impact Assessment were conducted. These studies are intended to identify and protect archaeological and culturally significant resources. As well, they provide opportunity to identify ancestral ties to cultural resources and promote the value of cultural resources as a distinguishing element of the Hana Community Plan region.

The proposed action is subject to review and protocols of the County of Maui's Special Management Area, which enables the Hāna Advisory Committee and the Maui Planning Commission to consider historic resources impacts as part of the decision-making and permit issuance process.

## PHYSICAL INFRASTRUCTURE

### Goal

*Timely and environmentally sensitive development and maintenance of infrastructure systems which protect and preserve the safety and health of the Hāna region's residents and visitors, including the provision of domestic water, utility and waste disposal services, and effective transportation systems which meet the needs of residents and visitors while protecting the region's rural character.*

### Objectives and Policies

### All Areas

- *Ensure community participation, including resident Hawaiian, in all long-term infrastructure planning.*

### Liquid and Solid Waste

- *Develop and implement a comprehensive waste management plan which includes reduction, recycling and reuse of solid waste and wastewater as major plan components.*

**Response**: The Department of Environmental Management (DEM) participated in community engagement events to inform Hāna residents of the proposed action. Both the Chapter 343, HRS and SMA permitting processes foster community participation as well. The proposed action is designed to provide a reliable and functional wastewater treatment system for Helene Hall which will ensure the long-term viability of this important community gathering facility. Further, the improvements will provide system redundancy that could be used in case the new wastewater treatment system is offline for maintenance or other unforeseen problems.

## GOVERNMENT

### Goal

*The provision of accessible, cost effective, and responsive government services and programs which meet the unique needs of residents and the cultural, geographic and socio-economic characteristics of the Hāna region.*

**Objectives and Policies**

- *Encourage improved communication between government agencies and residents in order to improve residents' understanding of the development permit process and compliance with regulatory requirements.*

- *Maintain the Hana Advisory Committee to the Maui Planning Commission to make recommendations regarding all land use policies, permits, and changes in designation within the Hana District.*

**Response**: As noted above, the DEM has initiated and will continue to engage with members of the Hāna Community to discuss project design and implementation requirements. As part of the County's SMA permitting process, the Hāna Advisory Committee will conduct a public hearing on the project's SMA and Shoreline Setback Variance applications.

## F. MAUI COUNTY ZONING

The Maui County zoning designation for the parcel underlying Helene Hall (Parcel 34) is Park (Pk), while the Hāna Ball Park property (Parcel 29) is zoned "P-1, Public/Quasi-Public".

The Park zoning district establishes park areas designed to meet passive and active recreational needs. This district category may be located in the state urban, rural, or agricultural district and is intended to provide maximum flexibility for the planning and development of park facilities to meet the growing and diverse needs of the community.

Public/Quasi-Public districts provide for public, nonprofit, or quasi-public uses. Wastewater treatment facilities are a permitted use in this district.

The proposed action is in keeping with the respective zoning standards set forth in the Maui County Code.

## G. COASTAL ZONE MANAGEMENT

The Hawai'i Coastal Zone Management Program (HCZMP), as formalized in Chapter 205A, HRS, establishes objectives and policies for the preservation, protection, and restoration of natural resources of Hawai'i's Coastal Zone. The Coastal Zone Management (CZM) area is defined as lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the United States territorial sea. The County of Maui utilizes its SMA regulatory mechanism to implement the HCZMP.

The project site is located within the County of Maui's SMA. See **Figure 14**. This section analyzes the proposed Project area relative to CZM considerations, as set forth in Chapter

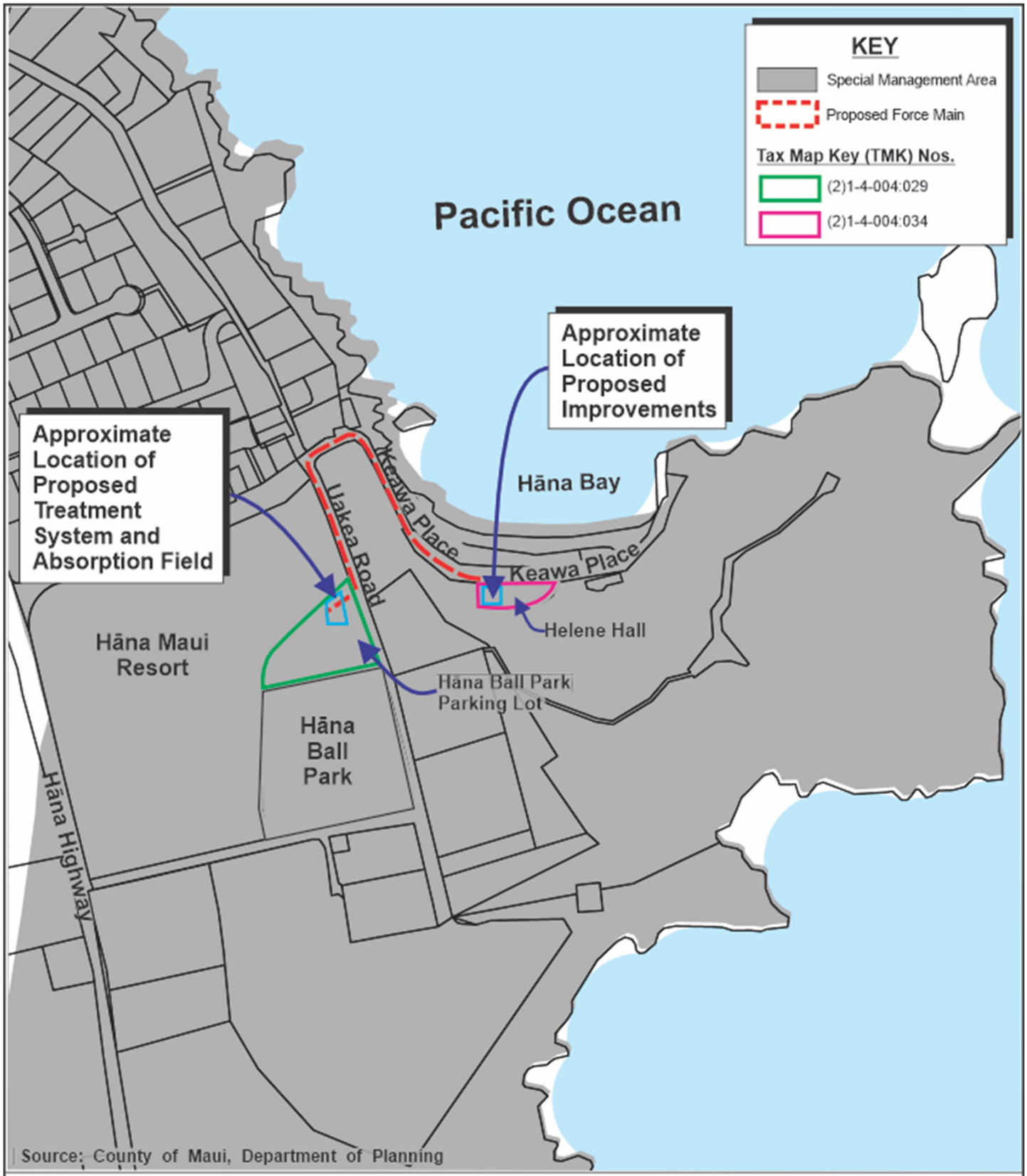


Figure 14 Proposed Helene Hall Septic System Improvements
Special Management Area Map

0 100 200 400 Feet

Prepared for: County of Maui, Department of Environmental Management

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205A, Hawai‘i Revised Statutes (HRS) and the SMA Rules and Regulations of the Maui Planning Commission.

**1. Recreational Resources**

**Objective:**

*Provide coastal recreational opportunities accessible to the public.*

**Policies:**

*a. Improve coordination and funding of coastal recreational planning and management; and*

*b. Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*

*i. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*

*ii. Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;*

*iii. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*

*iv. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*

*v. Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*

*vi. Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*

*vii. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*

*viii. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board .of land and natural resources, and county authorities; and*

*crediting such dedication against the requirements of Section 46-6, HRS.*

**Response:** As a wastewater improvement project for Helene Hall, the proposed action is intended to bring greater functionality and utility to this community center. In so doing, the project advances the policy of providing adequate, accessible and diverse recreational opportunities for Hāna residents.

**2. Historic Resources**

**Objective:**

*Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*

**Policies:**

*a. Identify and analyze significant archeological resources;*

*b. Maximize information retention through preservation of remains and artifacts or salvage operations; and*

***c.*** *Support state goals for protection, restoration, interpretation, and display of historic resources*

**Response:** An Archeological Literature Review Field Inspection, Archaeological Monitoring Plan, and a Cultural Impact Assessment have been prepared for the proposed action. These undertakings have been completed in consonance with the Coastal Zone Management Program's objective of protecting, preserving and restoring historic and cultural resources.

**3. Scenic and Open Space Resources**

***Objective:***

*Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.*

**Policies:**

*a. Identify valued scenic resources in the coastal zone management area;*

*b. Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*

*c. Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*

*d. Encourage those developments that are not coastal dependent to locate in inland areas.*

**Response:** The proposed wastewater system improvements for Helene Hall will not have an adverse impact on the quality of coastal scenic and open space resources. Work to be performed involves primarily subsurface improvements. The proposed treatment works will not impinge on scenic view corridors nor will it affect view planes in either the mauka or makai direction.

**4. Coastal Ecosystems**

**Objective:**

*Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*

**Policies:**

*a. Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*

*b. Improve the technical basis for natural resource management;*

*c. Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*

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

*e. Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

**Response:** In seeking to preserve coastal ecosystems, a number of measures will be implemented during the construction phase of the proposed action. During construction, the Project will implement BMP measures as well as a Site Specific Spill Prevention and Control Plan (SSSPCP). With these measures, the proposed action is not anticipated to contravene the objective and policies for coastal ecosystems.

## 5. Economic Uses

**Objective:**

*Provide public or private facilities and improvements important to the State's economy in suitable locations.*

**Policies:**

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

*b. Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*

*c. Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*

*i. Use of presently designated locations is not feasible;*

*ii. Adverse environmental effects are minimized; and*

***iii.** The development is important to the State's economy*

**Response:** The proposed action will create positive short-term economic benefits through construction spending and employment. From a long-term perspective, the proposed improvements will restore the functionality and utility of Helene Hall, a facility considered significant in advancing the welfare of Hāna residents.

## 6. Coastal Hazards

**Objective:**

*Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*

**Policies:**

*a. Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;*

*b. Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;*

*c. Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*

*d. Prevent coastal flooding from inland projects.*

**Response:** The proposed action is designed to relocate treatment and disposal components of the Helene Hall wastewater system to the Hāna Ball Park parking lot. In so doing, the project diminishes the wastewater system's susceptibility to adverse effects from tsunami and coastal flooding.

**7. Managing Development**

**Objective:**

*Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*

**Policies:**

*a. Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*

*b. Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and*

*c. Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

**Response:** Opportunity for public review and consideration of the proposed action is provided through the EA and SMA Use Permit application review processes. Through these processes, public education and input objectives are being achieved.

It is noted that the DEM has conducted outreach meetings with Hāna residents to apprise them of the proposed action. The DEM has, so far, participated in three (3) public meetings held by Maui County Councilmember Shane Sinenci. An additional community meeting was scheduled for September 26, 2022, however, this meeting was postponed to October 11, 2022 due to internet connectivity issues in Hāna. This coordination will continue through the planning, design and construction phases of work.

## 8. Public Participation

**Objective:**

*Stimulate public awareness, education, and participation in coastal management.*

**Policies:**

*a. Promote public involvement in coastal zone management processes;*

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

*c. Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

**Response:** The project planning process has been consistent with the public participation objectives and policies of Chapter 205A, HRS. Opportunity for public awareness, education, and participation pertaining to significant resource attributes of the coastal zone is provided through the EA and SMA Use Permit application review processes. As discussed above, a public hearing will be held by the Hāna Advisory Committee to review the SMA Use Permit and Shoreline Setback Variance applications. Noticing for the public hearing will be conducted in accordance with the Planning Commission's SMA rules.

As noted above, the DEM has, and will continue to engage the community through public meetings to ensure that project information is shared and input regarding the proposed action is received and considered.

## 9. Beach Protection

**Objective:**

*Protect beaches for public use and recreation.*

**Policies:**

*a. Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*

*b. Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;*

*c. Minimize the construction of public erosion-protection structures seaward of the shoreline;*

*d. Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*

*e. Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.*

**Response**: The proposed action involves the relocation of the treatment and absorption field elements to the Hāna Ball Park parking lot, a measure intended to protect the Hāna Bay Park from adverse impacts attributed to the deficiencies of the existing system. While the 1.5 in. force main within Keawa Place does fall within the shoreline setback, it is not anticipated to affect shoreline process nor is it anticipated to adversely affect beach access and recreational value.

**10. Marine Resources**

**Objective:**

*Promote the protection, use, and development of marine and coastal resources to assure their sustainability.*

**Policies:**

*a. Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*

*b. Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*

*c. Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*

*d. Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and*

*e. Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

**Response**: The proposed action advances the objective of protecting marine and coastal resources by improving Helene Hall's wastewater system. As well, BMPs will be employed during the construction phase of the project to establish the needed protective measure for the nearby Hāna Bay.

In addition to the foregoing objectives and policies, HRS Section 205A-30.5, Prohibitions, provides specification for the limitation of lighting in coastal shoreline areas:

> *No special management area use permit or special management area minor permit shall be granted for structures that allow artificial light from floodlights, uplights, or spotlights used for decorative or aesthetic purposes when the light: (1) Directly illuminates the shoreline and ocean waters; or (2) Is directed to travel across property boundaries toward the shoreline and ocean waters.*

In addressing light pollution issues, the proposed lighting at the Hāna Ball Park treatment and absorption field project components are anticipated to be limited to shielded and downward facing for the treatment works building.

## H. SPECIAL MANAGEMENT AREA RULES AND REGULATIONS OF THE MAUI PLANNING COMMISSION

The project area is located within the Special Management Area (SMA). Refer to **Figure 14**. The Rules and Regulations of the Maui Planning Commission, Chapter 202 was established in order to implement HRS, Chapter 205A relating to Coastal Zone Management (CZM) and the SMA. In addition to establishing procedures for processing of SMA applications and procurement of related permits, the rules assist the Maui Planning Commission in assessing State policy regarding coastal zone management parameters.

This section addresses the project's relationship to applicable coastal zone management considerations as set forth in the Maui Planning Commission Rules and Regulations, Chapter 202, "Special Management Area Permit Procedures", which are provided for considering the significance of potential environmental and ecological effects of a proposed action. The criteria has been reviewed and analyzed with respect to the proposed project.

### 1. Involves an irrevocable commitment to loss or destruction on any natural or cultural resources.

A Cultural Impact Assessment (CIA) was conducted for the proposed project which involved background research on the project area and outreach to 45 Native Hawaiian Organizations (NHOs), agencies and community members. Background

research revealed that fishing and use of heiau for ceremonial and religious practices were traditionally conducted in the Kawaipapa Ahupuaʻa in which the project is located. However, no existing traditional cultural practices were identified in the project area. In addition, in accordance with Section 6E-43.6, Hawaiʻi Revised Statutes (HRS) and Chapter 13-300, Hawaiʻi Administrative Rules (HAR), if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and SHPD will be contacted to establish the appropriate protocols and level of mitigation. Furthermore, the project is proposed within existing development and is intended to treat wastewater, which will aid in the protection of natural resources. As such, the project is not anticipated to involve an irrevocable commitment, loss or destruction of natural or cultural resources.

**2. Significantly curtails the range of beneficial uses of the environment.**

The proposed action will occur within an existing developed area of Hāna and will not significantly curtail the range of beneficial uses of the environment. Applicable dust control, noise control, and BMPs will be implemented during construction to minimize any construction-related impacts.

The improvements are not expected to have an adverse effect on downstream properties. As such, this project will not significantly curtail the range of beneficial uses of the environment.

**3. Conflicts with the County's or the State's long term environmental policies or goals.**

The proposed project does not conflict with the State Environmental Policy and Guidelines set forth in Chapter 344, HRS. The proposed action is also in consonance with environmental goals, objectives and policies of the Countywide Policy Plan, the Maui Island Plan and the Hana Community Plan.

**4. Substantially affects the economic or social welfare and activities of the community, County, or State.**

On a short-term basis, the proposed action will support construction and construction-related employment and have a beneficial impact on the local economy during the period of construction. In the long term, the Hāna community will be able to utilize Helene Hall to the fullest extent which will allow for civic, cultural, and recreational events. The proposed project is not anticipated to have significant adverse impact on the economic or social welfare of the community, County, or State.

5. **Involves substantial secondary impacts, such as population changes and increased effects on public facilities, streets, drainage, sewage, and water systems, and pedestrian walkways.**

The proposed action is not part of a larger action, nor would it occur within the context of such actions. The Helene Hall Septic Systems Improvements project is not a population generator and will not result in significant adverse secondary impacts to the population or public services, facilities, and infrastructure systems. The project is within the Small Town Boundary (STB) of the MIP, and is intended to ensure the continued availability and utility of Helene Hall, a key component of the Hāna small town community. Refer to **Figure 12**.

6. **In itself has no significant adverse effects but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.**

The proposed project is not part of a larger action, nor would it occur within the context of such actions. There are no significant community growth impacts resulting from or occurring with the project. Therefore, there are no cumulatively considerable effects upon the environment.

7. **Substantially affects a rare, threatened or endangered species of animal, plants, or its habitat.**

There are no rare, threatened or endangered species of animal, plants or their habitats in or adjacent to the site. As noted in Chapter II, the Biological Resources Survey (Refer to **Appendix "B"**) did not find any rare, threatened or endangered species of animal or plants in the project vicinity. The project also received comments from the USFWS identifying potential endangered species and fauna which may be found in this region of the island. The project will implement applicable USFWS recommended mitigation measures as well as those BMPs noted in the Biological Resources Study. Adverse impacts to these resources are not expected.

8. **Is contrary to the State's plan, County's general plan, appropriate community plans, zoning and subdivision ordinances.**

The proposed action is in consonance with the goals, objectives and policies of the Hawaiʻi State Plan, Countywide Policy Plan, MIP and Hana Community Plan. The proposed action is permitted by County zoning.

**9. Detrimentally affects air or water quality or ambient noise levels.**

Short-term impacts on air quality and noise impacts are expected during construction. Implementation of Best Management Practices (BMPs) will mitigate short-term construction-related impacts. The improvements are not expected to have an adverse effect on the existing downstream properties. As such, this project will not be detrimental to air or water quality or ambient noise levels.

**10. Affects an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh waters, or coastal waters.**

According to the FEMA Flood Insurance Rate Map for the area, the majority of the project site falls within Zone X while a small portion of roadway on Keawa Place is in Flood Zone VE. Refer to **Figure 7**. The work that will be done within the Keawa Place ROW will be the laying of the new subsurface 1.5 in. force main that will connect Helene Hall to the new treatment system and absorption field at the Hāna Ball Park parking lot. Flood Zone VE is a high risk coastal area with a one (1) percent or greater chance of annual flooding with increased risk due to storm waves and base flood elevations determined. Applicable certifications and permits will be obtained for the proposed work that will be done within this area. In addition, the project site is not affected by the projected 3.2 foot sea level rise exposure area.

Drainage mitigation measures will be implemented in accordance with the Drainage Standards of the County of Maui to ensure that the project will not adversely affect any downstream properties from the effects of flooding and erosion. With the implementation of the aforementioned BMPs and reports, adverse impacts to hazard sensitive areas are not anticipated.

Part of the project site, specifically Helene Hall and Keawa Place are located within the Tsunami Evacuation Zone. The proposed new treatment system and absorption field are located in the Safe Zone. Procedures to organize and direct operations at Helene Hall in the event of an emergency or civil defense action, such as a tsunami, are a part of the County's operating protocols.

**11. Substantially alters natural land forms and existing public views to and along the shoreline.**

Helene Hall is located at Hāna Bay. The repurposing of the ATUs will not affect natural land forms and public views. The new treatment system and absorption field that will be located at the Hāna Ball Park parking lot is about a quarter mile away from the shoreline. These project elements will not alter the natural land forms and existing public views to and along the shoreline.

### 12. Is contrary to the objectives and policies of chapter 205A, HRS.

A review of the objectives and policies of Chapter 205A, HRS is provided in its entirety in the previous part of this section. Therein, it addresses the project's relationship to the Coastal Zone Management considerations. Based on the foregoing analysis, the project will appropriately and adequately mitigate impacts to SMA-relevant areas of interest. Accordingly, there are no significant adverse environmental impacts anticipated with the proposed project.

## I. SHORELINE SETBACK RULES OF THE MAUI PLANNING COMMISSION

The subject parcels (TMK (2)1-4-004:034 and (2)1-4-004:029 (por.) are not located within 150 feet of the shoreline. However, one (1) section of the proposed new force main that will be laid underground within the Keawa Place ROW is within the shoreline setback and is subject to the Maui Planning Commission's Shoreline Setback (SS) Rules, Section 12-203, Maui Planning Commission Rules.

### 1. Certified Shoreline Survey

Pursuant to the Shoreline Setback Rules of the Maui Planning Commission, Section 12-203-8:

> *The shoreline shall be established and certified in accordance with the procedures prescribed by the board of land and natural resources; provided that , no determination of the shoreline shall be valid for a period longer than twelve months except for those portions of the shoreline which are fixed by man-made structures; which have been approved by appropriate government agencies; and for which engineering drawings exist to locate the interface between the shoreline and the structure.*

The DEM consulted with Department of Planning personnel on May 18, 2021 to discuss compliance with shoreline setback rules. It was determined that the proposed sewer force main, the only portion of the project located within the shoreline setback, would require a shoreline setback variance. Furthermore, it was determined that the wall along Keawa Place does not meet the criteria for fixing the shoreline and would not nullify the requirement for a State of Hawai‘i certified shoreline survey.

Upon review of the project scope, the Department of Planning recommended that the requirement for a State certified shoreline be provided as a condition of the project, thus allowing DEM to move forward with approval by the Maui Planning Commission prior to obtaining a certified shoreline survey with the project

application. As such, a State certified shoreline will be provided by the project's contractor in accordance with the foregoing proposed condition.

## 2. Shoreline Setback Calculation

The proposed project consists of the improvements to the wastewater system at Helene Hall. The proposed action is to rehabilitate one (1) ATU with a new aeration blower and to repurpose the other as a wastewater pump station. The wastewater will then be pumped uphill from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park parking lot. The wastewater from Helene Hall will be connected to the treatment system and absorption field at a portion of the Hāna Ball Park parking lot via an underground 1.5 in. force main that runs approximately 1,500 feet within the ROWs of Keawa Place and Uakea Road.

Pursuant to Section 12-203-6 of the Shoreline Setback Rules, the shoreline setback shall be measured using the Average Lot Depth (ALD) method or Annual Erosion Hazard Rate (AEHR) method. This means that the setback ranges from 40 feet to 150 feet from the shoreline, and a section of the improvements along Keawa Place will fall within the shoreline setback.

Components of the proposed action that will occur within the shoreline setback area include the laying of the new force main that connects Helene Hall to the new treatment system and absorption field. The force main that will be installed on Uakea Road and up to the new treatment system and absorption field are outside of the shoreline setback area. See **Figure 15**.

## 3. Analysis of Shoreline Setback Criteria

The action that is proposed within the shoreline setback area is the installation of a new subsurface 1.5 inch force main that connects the wastewater system elements at Helene Hall to the new treatment system and absorption field at the Hāna Ball Park parking lot. A Shoreline Setback Variance (SSV) will be sought for the segment of the new force main which falls within the shoreline setback along Keawa Place. The SSV request is limited to this component of the proposed project; the improvements at Helene Hall and the new treatment system and absorption field are outside of the shoreline setback.

The proposed installation of a new underground force main has been assessed with respect to applicable "Criteria for Approval of a Variance", Section 12-203-15, of the MPC Shoreline Rules.

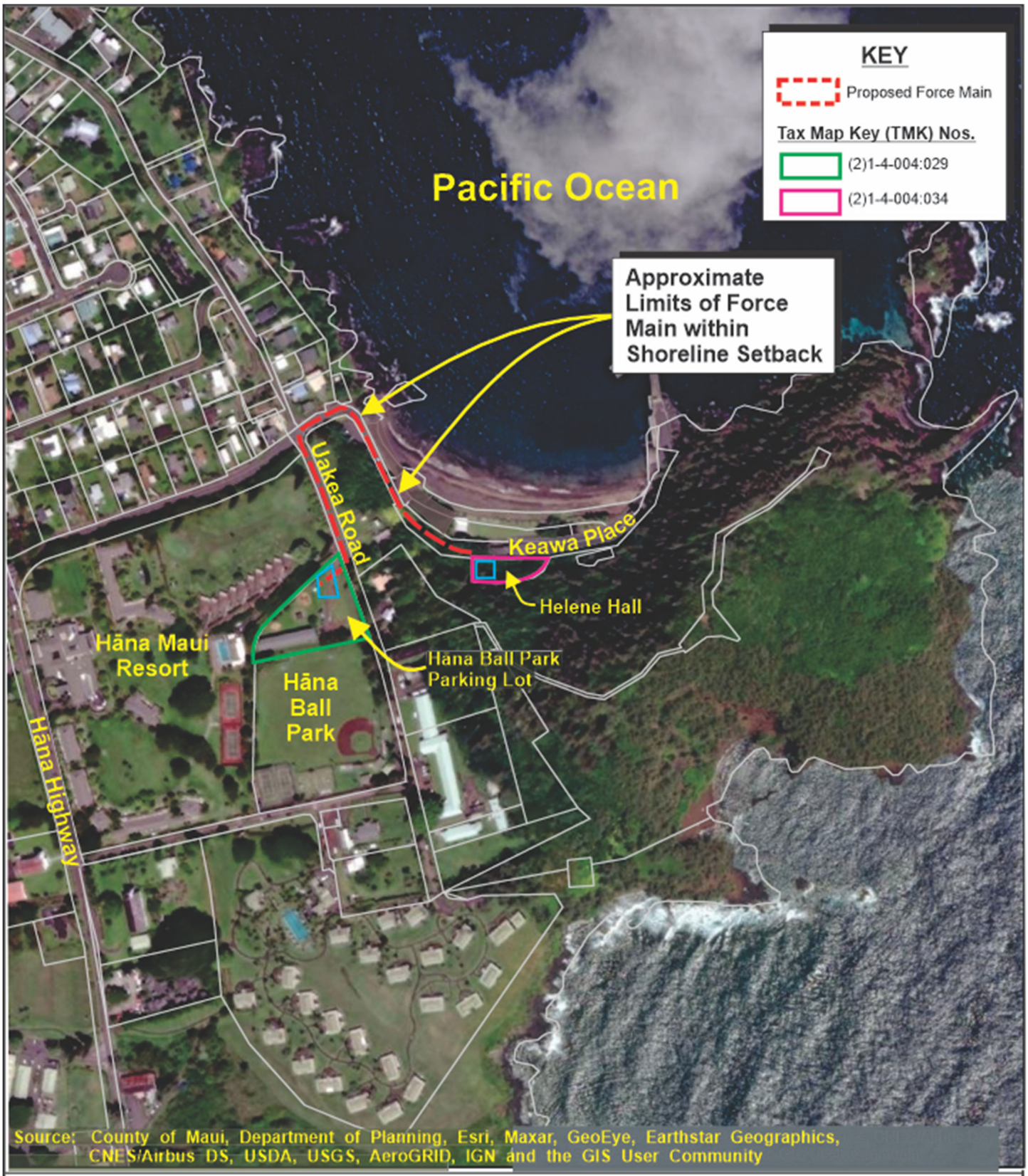


Figure 15 Proposed Helene Hall Septic System Improvements

Approximate Limits of Force Main within Shoreline Setback Map

0 100 200 400 Feet

MUNEKIYO HIRAGA

Prepared for: County of Maui, Department of Environmental Management

Kennedy Jenks/Helene Hall WW Upgrade\Applications\Figures\ShorelineSetback

*(a) A shoreline area variance may be granted for a structure or activity otherwise prohibited by this chapter, if the commission finds in writing, based on the record presented, that the proposed structure or activity is necessary for or ancillary to:*

* * *

*(6) Facilities or improvements by public agencies or public utilities regulated under HRS chapter 269;*

**Response:** The SSV request to install an underground force main from Helene Hall to the proposed new treatment system and absorption field is directly related to a public facility improvements project by a public agency, under HRS chapter 269. These improvements will benefit the public and allow the public the full use of the Helene Hall Community Center.

*(e) No variance shall be granted unless appropriate conditions are imposed:*

*(1) To maintain and require safe lateral access to and along the shoreline for public use or adequately compensate for its loss;*

**Response:** The proposed action will support the safe access to the shoreline for public use. Helene Hall is located in close proximity to Hāna Bay and, as such, the wastewater improvements will allow for the prevention and mitigation of wastewater spills or leakages of wastewater into the Pacific Ocean. This project will provide the public with safe and healthy access to Hāna Bay.

*(2) To minimize risk of adverse impacts on beach processes;*

**Response:** As previously stated, this improvements project will support the mitigation efforts of potential adverse wastewater spills or leakage into the Pacific Ocean. As such, negative impacts to beach processes are not anticipated.

*(3) To minimize risk of structures failing and becoming loose rocks or rubble on public property;*

**Response:** Work associated with the force main along Keawa Place will involve trenching and backfilling. There will be no structural material, including loose rocks that will be a part of the installation. Therefore, there is no risk of such material being inadvertently placed on public property.

*(4) To minimize adverse impacts on public views to, from, and along the shoreline. For purposes of this section only, "adversely impacts public views" means the adverse impact on public views and open space resources caused by new building structures exceeding a one-story or thirty-foot height limitation;*

**Response:** The segment of the 1.5 in. force main within the setback area is a subsurface component of the project. Accordingly, there are no impacts to public views to, from, and along the shoreline.

*(5) To comply with chapters 19.62 and 20.08, Maui County Code, relating to flood hazard districts and erosion and sedimentation control respectively.*

**Response:** The DEM will comply with applicable provisions of Chapter 19.62 and Chapter 20.08 of the Maui County Code.

# IV

# SUMMARY OF ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

# IV. SUMMARY OF ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The proposed project may result in unavoidable short-term construction-related impacts. Construction-related impacts include noise generation occurring from heavy equipment, temporary dust and air quality impacts from ground disturbances, exhaust emissions discharged by construction equipment, and traffic disruptions.

To mitigate these impacts, Best Management Practices (BMPs) will be employed and construction will be carried out in compliance with State Department of Health (DOH) Community Noise Control standards. BMPs will follow the Maui Department of Public Works, Chapter 15-111, Rules for the Design of Storm Water Treatment, Best Management Practices, and the State of Hawai‘i, Construction Best Management Practices Field Manual (January 2008). A traffic control plan will be implemented to minimize roadway disruptions. Further, a site specific spill protection and control plan (SSSPCP) will be submitted and approved.

In summary, the proposed action is not anticipated to create any significant, long-term adverse environmental effects which cannot be avoided.

# ALTERNATIVES ANALYSIS

# V

# V. ALTERNATIVES ANALYSIS

## A. PREFERRED ALTERNATIVE

The proposed improvements outlined in Chapter I of this Environmental Assessment (EA) document represent the preferred alternative. This involves rehabilitating one aerobic treatment unit (ATU) with a new aerating blower and repurposing the other ATU as a wastewater pump station. The wastewater from Helene Hall will be connected to the treatment system and absorption field at a portion of the Hāna Ball Park parking lot via a subsurface 1.5 inch (in.) force main that will run approximately 1,500 feet along Keawa Place and Uakea Road. The proposed work to be done along the roadways and will take place within existing rights-of-way (ROW).

The Department of Environmental Management (DEM) determined that the preferred alternative provides the best scenario to provide wastewater disposal in a safe and sustainable manner while allowing for the Helene Hall facility to meet public usage demands. This design was also chosen based on the improvements to system operability, reliability, and treated water quality. It will provide aerobic pretreatment, which will yield better $BOD_5$ removal and reduce the size of the new wastewater treatment system. This design will provide additional system redundancy that could be used in case the new wastewater treatment system is offline for maintenance or other unforeseen problems.

## B. DESIGN ALTERNATIVE

Design alternatives were considered by the DEM in the early stages of planning and design for this project. Two (2) designs were explored, and based upon the reasons mentioned above, the DEM rejected the alternative design. In the alternative design that was not selected, one (1) of the ATUs would be repurposed as a settling tank instead of rehabilitated as an aerobic tank. The other ATU would still be converted into a wastewater pump tank to transport the wastewater to the new treatment system and absorption field located at the Hāna Ball Park parking lot.

The design alternative of repurposing the settling tank was not selected for various reasons. While both options would yield similar probable costs, the preferred option of rehabilitating the ATU was recommended based on improving system operability, reliability, and treated water quality. For example, the preferred alternative of rehabilitating the ATU with a new aeration blower provides aerobic pretreatment, which will provide better $BOD_5$ removal. With this pretreatment process, the size of the wastewater treatment component of the project can then be reduced. This option is also preferred because it provides additional system redundancy that could be used in case the new wastewater treatment system is offline for maintenance or other unforeseen problems.

## C. NO ACTION ALTERNATIVE

The current (ATUs) are not functioning and are serving more as settling and holding tanks for wastewater before it is disposed in cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flow. This causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. As such, the community is not able to utilize Helene Hall to its full functional use. If no action is taken, County staff will need to continue pumping out the ATUs and cesspools on a regular basis or close the use of the restrooms and kitchens and the potential for a hazardous wastewater spill or leakage into the Pacific Ocean will continue to be of concern. As such, the no action alternative was rejected.

## D. DEFERRED ACTION ALTERNATIVE

As previosuly mentioned, the current ATUs are not functioning and the current cesspools do not have adequate capacity to discharge normal daily flows. If renovations are delayed, County staff will need to continue pumping down the ATUs and cesspools, the public will not be able to utilize Helene Hall to the fullest extent, conditions will continue to erode, the potential for a wastewater leakage into the Pacific Ocean remains a high level of concern, and it will be more difficult and likely more expensive to rehabilitate in the future. For these reasons, the deferred action alternative was not deemed appropriate.

# IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

# VI

# VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed improvements to the existing aerobic treatment units (ATUs) at Helene Hall will rehabilitate and enhance, rather than inhibit, the wastewater treatment capacity of the facility. Additionally, installation of the force main within existing rights-of-way (ROW) will not reduce the operational capacity or use of Keawa Place and Uakea Road. Construction of the new treatment system and absorption field at the Hāna Ball Park parking lot will slightly reduce the property's parking capacity as infrastructure will be placed there, however, in the long term, it will not impede the community's access or ability to utilize the parking lot.

The proposed action will provide for additional wastewater capacity to an existing community facility in Hāna. Implementation of the proposed project will involve a commitment of energy, labor, fiscal, and material resources. The use of these resources, when weighed against the expected benefit derived from the proposed project, is not considered an adverse commitment.

# SIGNIFICANCE CRITERIA ASSESSMENT

# VII

# VII. SIGNIFICANCE CRITERIA ASSESSMENT

The Applicant is proposing to rehabilitate one (1) existing aerobic treatment unit (ATU) with a new aeration blower and to repurpose the other existing ATU as a wastewater pump station. The wastewater will then be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile away. The wastewater will be connected to the treatment system and absorption field at a portion of the Hāna Ball Park parking lot via an underground 1.5 inch force main that runs approximately 1,500 feet along Keawa Place and Uakea Road, all within existing rights-of-way (ROWs). The use of State lands, County lands, and County funds requires compliance with Chapter 343, Hawaiʻi Revised Statutes (HRS) and Chapter 200.1 (Title 11), Hawaiʻi Administrative Rules. The "Significance Criteria", Section 13 of the Hawaiʻi Administrative Rules (HAR), Title 11, Chapter 200.1, "Environmental Impact Statement Rules", was reviewed and analyzed to determine whether the proposed project area will have significant impacts on the environment. The following criteria and analysis are provided.

**1. <u>Irrevocably commit a natural, cultural, or historic resource.</u>**

The proposed action involves upgrades to the existing Helene Hall wastewater treatment and disposal system. The proposed action will complement the surrounding environment by allowing the community to fully utilize Helene Hall. As documented by the Biological Resources Survey and the accompanying analysis represented in Chapter II, there are no significant adverse effects on natural resources as anticipated as a result of the project area. Refer to **Appendix "B"**.

As discussed in Chapter II, the proposed project is not anticipated to involve an irrevocable commitment to loss or destruction of any cultural or historic resource. A Cultural Impact Assessment (CIA) and Archaeological Literature Review and Field Inspection (LRFI) have been conducted to address potential impacts on any historic/cultural resources. Please refer to **Appendix "C-1",** and **Appendix "D"**. An Archaeological Monitoring Plan has been prepared for review and acceptance by the State Historic Preservation Division. Refer to **Appendix "C-3"**. DEM will follow recommended mitigation measures as required by SHPD.

The proposed project is not anticipated to involve an irrevocable commitment to loss or destruction of any natural or cultural resources.

**2. <u>Curtails the range of beneficial uses of the environment.</u>**

The proposed action is limited to the improvements and rehabilitation of the wastewater system at Helene Hall. Helene Hall and the Hāna Ball Park parking lot are located within the Small Town Boundary of the Maui Island Plan and is in consonnace with the Hana Community Plan and Maui County Zoning.

Development of detailed engineering and architectural plans for the project will allow for the identification of a comprehensive program of Best Management Practices (BMPs) to minimize any short-term construction-related impacts. The proposed action will allow the residents of Hāna to fully utilize Helene Hall and, therefore, represents an opportunity to enhance benefits to the Hāna Community. There are no anticipated adverse impacts which can be considered to curtail the range of beneficial uses of the environment.

**3. Conflict with the State's environmental policies or long-term environmental goals established by law.**

The proposed project does not conflict with the State's Environmental Policy and Guidelines such as those established in Chapter 344, HRS, nor does it conflict with any court decisions or Executive Orders. As discussed in Chapter III, the proposed project is consistent with the property's underlying land use designations, which were established to guide development patterns in the region.

**4. Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State.**

On a short-term basis, the project will have a beneficial impact on the economic welfare of the community. The project will support construction and construction-related industries, thereby increasing employment opportunities to result in a beneficial impact on the local economy during the period of construction. On a long-term basis, the project will allow for the Hāna community to fully utilize Helene Hall and provide East Maui a recreational center with a modern and code-compliant wastewater treatment and disposal system. Therefore, the proposed project is not anticipated to result in adverse impacts to the economic welfare, social welfare, or ongoing cultural practices in the region.

**5. Have a substantial adverse effect on public health.**

During the construction period, appropriate BMPs will be implemented to mitigate potential drainage, air quality, and noise impacts. A site specific spill protection and control plan (SSSPCP) will also be developed and approved prior to construction. The proposed project is intended to advance public health through the provision of an improved wastewater system.

**6. Involve adverse secondary impacts, such as population changes or effect on public facilities.**

The proposed project is not a population driver and does not involve substantial secondary impacts. Secondary impacts are effects which are caused by the action and occur later in time or farther removed in distance, but are still reasonably foreseeable. The proposed action involves improvements to the existing wastewater system at Helene Hall. This project is designed to allow the Hāna community full use of Helene Hall and enhance an

existing public facility. There are no substantial secondary effects of the project that are deemed detrimental to the community's well-being.

**7. <u>Involves a substantial degradation of environmental quality.</u>**

Construction activities will create temporary short-term nuisances related to noise and dust. Appropriate BMPs, including dust control and noise mitigation measures, will be implemented by the contractor to ensure that potential impacts generated in connection with construction are minimized.

From a long-term perspective, the project will mitigate the risk of any hazardous wastewater spills, seepage, or leaks into the Pacific Ocean and contribute to a safer and cleaner environment. As previously discussed, the proposed project does not involve the degradation of environmental quality.

**8. <u>Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions.</u>**

The project is not a phase or increment of a larger total undertaking; a necessary precedent for a larger project; a commitment to some larger project; or one (1) of a series of individual actions planned by the DEM within East Maui in the reasonably foreseeable future. The proposed project will stand on its own and is not reliant upon or a trigger for any other development within East Maui or elsewhere. This proposed action is part of the County of Maui's initiative to improve and rehabilitate the wastewater system at Helene Hall to allow the community's full use of the facility, as well as avoid any potential environmentally detrimental wastewater spills or leakages into the Pacific Ocean. Given the foregoing, the proposed project is not anticipated to cumulatively have effects upon the environment, nor does it involve a commitment for larger actions.

**9. <u>Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat.</u>**

A Biological Resources Survey was prepared to ensure that any sensitive terrestrial flora/fauna biological resources within the project site would be identified and provided adequate protection. Refer to **Appendix "B"**. The survey concluded that the proposed project will not have a significant adverse impact on native botanical resources. The endangered Hawaiian hoary bat was not encountered either visually or electronically during the survey. During the early consultation process of this Final EA with the USFWS, the agency shared a list of potential endangered species that may be affected by the project. As recommended by the USFWS, the project will incorporate appropriate mitigation measures to avoid and minimize impacts to native species.

In consideration of the foregoing, the proposed project is not anticipated to affect a rare, threatened, or endangered species or its habitat.

**10. Have a substantial adverse effect on air or water quality or ambient noise levels.**

Construction activities will result in short term air quality and noise impacts. BMPs, including erosion control and dust control measures, will be implemented to minimize wind-blown emissions. In the short term, noise impacts will occur primarily from construction equipment. Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawaiʻi, Department of Health (DOH) Administrative Rules Title 11, Chapter 46, "Community Noise Control". These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in Chapter 46. In the long term, the rehabilitated and improved wastewater system is not anticipated to significantly impact air quality or ambient noise levels.

In seeking to protect marine water quality, a number of measures will be implemented during the construction and operational phases of the proposed project. A SSSPCP will be developed and approved prior to construction. During construction, the project will implement an erosion control plan to minimize runoff. Post-construction, no increase in runoff is anticipated from the proposed action.

As a result of implementation of foregoing mitigation measures, the proposed project is not anticipated to detrimentally affect air or water quality or ambient noise levels in the long term.

**11. Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.**

The project is primarily located in Flood Zone X, areas of minimal flood risk, though a portion of the proposed force main is located in Flood Zone VE, also known as coastal high hazard areas. The work that is proposed within Flood Zone VE will be a new 1.5 inch force main that is limited to the existing roadway ROW. In the long term, this new force main will not have an adverse effect on existing roadway operations. Helene Hall is within the Tsunami Inundation Zone. The proposed action at Helene Hall and the Keawa Place ROW will be to rehabilitate and improve the wastewater system and, in the long term, will not have any additional or further adverse effect. The proposed new treatment system and absorption field proposed at the Hāna Ball Park parking lot, along with the continuation of the new force main along the Uakea Road ROW, are located within the Safe Zone on the Tsunami Evacuation Zone Map. In addition, the proposed project directly fronts the shoreline, though it is not located within the 3.2-foot sea level rise exposure area and, thus, is not anticipated to be impacted by this environmental parameter.

**12. <u>Have a substantial adverse effect on scenic vistas and viewplanes, during day or night, identified in county or state plans or studies.</u>**

The proposed project is limited to the rehabilitation and improvements to the existing wastewater system at Helene Hall. The proposed new force main will be underground within the Keawa Place and Uakea Road ROWs. The new absorption field at the Hāna Ball Park parking lot area will also not affect any viewplanes from the area. The proposed new treatment system at the Hāna Ball Park parking lot will be low profile and minimal in nature and will not adversely affect any scenic views.

**13. <u>Require substantial energy consumption or emit substantial greenhouse gases.</u>**

While the majority of construction-related activities utilize diesel operated construction equipment, there may be short term electrical energy needs while the project is under construction. In the short term, greenhouse gas emissions associated with construction activities are anticipated during the construction phase of the project. Following construction, energy consumption will be limited to operation of the pump station and aeration blower to transport and treat the wastewater. The action does not represent a new use in the Hāna region that would require substantial energy consumption. In the long term, this project is not anticipated to emit substantial greenhouse gases.

Based on the foregoing analysis, it is anticipated that the proposed action will result in a Finding of No Significant Impact (FONSI).

# LIST OF PERMITS AND APPROVALS

# VIII

# VIII. LIST OF PERMITS AND APPROVALS

**State of Hawai‘i**

1. Chapter 343, Hawai‘i Revised Statutes Compliance
2. National Pollutant Discharge Elimination System (NPDES) Permit, as applicable
3. Permit to Perform Work on State Highways
4. Hawai‘i Revised Statutes (HRS) Section 6E Review

**County of Maui**

1. Special Management Area (SMA) Use Permit, Shoreline Setback Variance
2. Construction Permits (Building, Grubbing, Electrical, Plumbing)
3. Special Flood Hazard Area Development Permit
4. Work on County Highway Permit

# PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

# IX

# IX. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies were consulted during preparation of the Draft Environmental Assessment (EA). This Chapter addresses early consultation comments received from these agencies, organizations, and individuals and are included herein.

**Federal Agencies**

1. National Marine Fisheries Service
   Pacific Islands Regional Office
   1845 Wasp Boulevard, Building 176
   Honolulu, HI 96818

2. Mr. Gerald Gregory, District Conservationist
   Natural Resources Conservation Service
   U.S. Department of Agriculture
   77 Hoʻokele Street, Suite 202
   Kahului, HI 96793

3. State Conservationist
   Natural Resources Conservation Service
   U.S. Department of Agriculture
   P.O. Box 50004
   Honolulu, HI 96850-0001

4. Ms. Linda Speerstra, Chief
   U.S. Department of the Army, Regulatory Branch
   U.S. Army Engineer District, Honolulu
   Regulatory Branch, Building 230
   Fort Shafter, HI 96858-5440
   **Send via email: CEPOH-RO@usace.army.mil**

5. Ms.Chelsie Javar-Salas, Island Team Leader
   U. S. Fish and Wildlife Service
   300 Ala Moana Blvd., Rm. 3-122
   Honolulu, HI 96850

**State Agencies**

6. Senator Lynn DeCoite
   Hawaiʻi State Senate
   Hawaiʻi State Capitol, Room 231
   415 S. Beretania Street
   Honolulu, HI 96813

7. Representative Linda Clark
   House of Representatives
   Hawaiʻi State Capitol, Room 303
   415 S. Beretania Street
   Honolulu, HI 96813

8. Ms. Patti Kitkowski
   District Environmental Health Program Chief
   State of Hawaiʻi
   Department of Health
   Maui Sanitation Branch
   54 South High Street, Room 300
   Wailuku, HI 96793

9. Ms. Kathleen Ho, Acting Director
   State of Hawaiʻi
   Department of Health
   Office of Environmental Quality Control
   235 S. Beretania Street, Suite 702
   Honolulu, HI 96813

10. Mr. Jade Butay, Director
    State of Hawaiʻi
    Department of Transportation
    869 Punchbowl Street
    Honolulu, HI 96813

11. Dr. Sylvia Hussey, Chief Executive Officer
    State of Hawaiʻi
    Office of Hawaiian Affairs
    560 N. Nimitz Highway, Suite 200
    Honolulu, HI 96817

12. State of Hawaiʻi
    Department of Education
    Office of Planning
    3633 Waialae Avenue, Room C-209
    Honolulu, HI 96816

13. Mr. William Aila, Jr., Chair
State of Hawai‘i
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

14. Dr. Elizabeth Char, PhD, Director
State of Hawai‘i
Department of Health
1250 Punchbowl St., Room 325
Honolulu, HI 96813

15. Mr. Alec Wong, P.E., Chief
State of Hawai‘i
Department of Health
Clean Water Branch
Hale Ola, Room 225
2827 Waimano Home Road
Pearl City, HI 96782

16. State of Hawai‘i
Department of Health
Environmental Health Administration
P.O. Box 3378
Honolulu, HI 96801

17. Mr. Lene Ichinotsubo
State of Hawai‘i
Department of Health
Solid and Hazardous Waste Branch
2827 Waimano Road, Suite 100
Pearl City, HI 96782-1407

18. Mr. Mike McCartney, Director
State of Hawai‘i
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, HI 96804

19. Major General Kenneth Hara, Adjutant General
State of Hawai‘i
Department of Defense
3949 Diamond Head Road
Honolulu, HI 96816

20. Mr. Keith Hayashi, Interim Superintendent
State of Hawai‘i
Department of Education
P.O. Box 2360
Honolulu, HI 96804

21. Mr. M. Kaleo Manuel, Deputy Director
State of Hawai‘i Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai‘i 96809

22. Mr. Curt Otaguro, Comptroller
State of Hawai‘i
Department of Accounting and General Services
1151 Punchbowl Street, #426
Honolulu, HI 96813

23. Ms. Phyllis Shimabukuro-Geiser, Chair
State of Hawai‘i
Department of Agriculture
1428 South King Street
Honolulu, HI 96814-2512

24. Ms. Suzanne Case, Chairperson
State of Hawai‘i
Department of Land and Natural Resources
P. O. Box 621
Honolulu, HI 96809

25. Mr. Michael Cain, Acting Administrator
State of Hawai‘i
Department of Land and Natural Resources
Office of Conservation and Coastal Lands
1151 Punchbowl Street, Room 131
Honolulu, HI 96813

26. Ms. Mary Alice Evans, Director
State of Hawai‘i
Office of Planning and Sustainable Development
P. O. Box 2359
Honolulu, HI 96804

**County of Maui Agencies**

27. Mr. Eric Nakagawa, Director
County of Maui
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, HI 96793

28. Mr. Bradford Ventura, Chief
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, HI 96732

29. Ms. Lori Tsuhako, Director
County of Maui
Department of Housing and Human Concerns
2200 Main Street, Suite 546
Wailuku, HI 96793

30. Ms. Karla Peters, Director
County of Maui
Department of Parks and Recreation
700 Halia Nakoa Street, Unit 2F
Wailuku, HI 96793

31. Mr. John Pelletier, Chief
County of Maui
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793

32. Ms. Michele Chouteau McLean, Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, HI 96793

33. Mr. Jordan Molina, Acting Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, HI 96793

34. Mr. Marc Takamori, Director
County of Maui
Department of Transportation
110 Ala‘ihi Street, Suite 210
Kahului, HI 96784

35. Ms. Helene Kau, Director
County of Maui
Department of Water Supply
200 South High Street, 5th Floor
Wailuku, HI 96793

36. Mr. Herman Andaya, Administrator
County of Maui
Maui Emergency Management Agency
200 South High Street
Wailuku, HI 96793

37. Ms. JoAnn Inamasu, Director
County of Maui
Office of Economic Development
2200 Main Street, Suite 305
Wailuku, HI 96793

38. Honorable Shane Sinenci
Maui County Council
200 South High Street
Wailuku, HI 96793

39. Honorable Yuki Lei Sugimura
Maui County Council
200 South High Street
Wailuku, HI 96793

40. Honorable Keani Rawlins-Fernandez, Council Vice Chair
Maui County Council
200 South High Street
Wailuku, HI 96793

41. Honorable Kelly King
Maui County Council
200 South High Street
Wailuku, HI 96793

42. Honorable Gabe Johnson
Maui County Council
200 South High Street
Wailuku, HI 96793

43. Honorable Tasha Kama
Maui County Council
200 South High Street
Wailuku, HI 96793

44. Honorable Alice Lee, Council Chair
Maui County Council
200 South High Street
Wailuku, HI 96793

45. Honorable Mike Molina
Maui County Council
200 South High Street
Wailuku, HI 96793

46. Honorable Tamara Paltin
Maui County Council
200 South High Street
Wailuku, HI 96793

**Maui County Organizations**

47. Ms. Ipo Mailou, President
Hāna Community Association
P. O. Box 202
Hāna, HI 96713

48. Mr. Michael Grider, Manager, Engineering
    Hawaiian Electric
    P.O. Box 398
    Kahului, HI 96733

49. Hawaiian Telcom
    Plan Review Department
    Email: HT-PlanReviews@hawaiiantel.com

50. Ms. Debbie Cabebe, Chief Executive Officer
    Maui Economic Opportunity
    99 Mahalani Street
    Wailuku, HI 96793

51. Mr. Albert Perez, Executive Director
    Maui Tomorrow
    55 North Chuch Street, Suite A4
    Wailuku, HI 96793

52. Spectrum
    158 Ma‘a Street
    Kahului, HI 96732

53. Keeaumoku Kapu
    Aha Moku O Maui
    E-mail: kapukapuakea@gmail.com

54. Sam Akoi
    Aha Moku O Maui
    E-mail: ulupono@gmail.com

55. Hāna Cultural Center
    P.O. Box 27
    Hāna, Hawai‘i 96713
    E-mail: mail@hanaculturalcenter.org

**Subject:** FW: Proposed Helene Hall Septic System Improvements - Early Consultation Letter to U. S. Department of the Army (DA File No. POH-2021-00136)

-----Original Message-----
From: Gayagas, Susan A CIV (USA) <Susan.A.Meyer@usace.army.mil>
Sent: Thursday, July 22, 2021 12:58 PM
To: Yolanda Poouahi <yolanda@munekiyohiraga.com>
Cc: Kari Luna Nunokawa <kari@munekiyohiraga.com>; Michael Munekiyo <mike@munekiyohiraga.com>; Kauanoe Batangan <kauanoe@munekiyohiraga.com>
Subject: RE: Proposed Helene Hall Septic System Improvements - Early Consultation Letter to U. S. Department of the Army (DA File No. POH-2021-00136)

This email confirms receipt of your firm's request for early consultation regarding the preparation of an environmental assessment (EA) for the proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawaiʻi. We have assigned Department of the Army (DA) file number POH-2021-00136 to this action. Please refer to this file number in all future correspondence with our office on this project.

Based on the July 1, 2021 early consultation request letter transmitted to our office, there is not enough information to provide project-specific comments. We request all aquatic resources that may occur on the project site be identified in the upcoming EA and that any proposed discharge of dredged or fill material into aquatic resources be quantified and coordinated with our Regulatory Office prior to work commencing to determine the jurisdictional status of the features and whether a DA permit is required.

Should you have questions or require additional information, please contact me.

Sincerely,
Susan

-----Original Message-----
From: CEPOH-RO, POH <CEPOH-RO@usace.army.mil>
Sent: Wednesday, July 07, 2021 7:15 AM
To: Yolanda Poouahi <yolanda@munekiyohiraga.com>; Gayagas, Susan A CIV (USA) <Susan.A.Meyer@usace.army.mil>
Subject: FW: Proposed Helene Hall Septic System Improvements - Early Consultation Letter to U. S. Department of the Army

Aloha Yolanda, thank you for your submittal. I've assigned your request to Susan Gayagas. She will be reaching out to you next week with a project number. Linda

From: Yolanda Poouahi <yolanda@munekiyohiraga.com>
Sent: Friday, July 2, 2021 12:57 PM
To: CEPOH-RO, POH <CEPOH-RO@usace.army.mil>
Cc: Kari Luna Nunokawa <kari@munekiyohiraga.com>; Michael Munekiyo <mike@munekiyohiraga.com>; Kauanoe Batangan <kauanoe@munekiyohiraga.com>
Subject: [Non-DoD Source] Proposed Helene Hall Septic System Improvements - Early Consultation Letter to U. S. Department of the Army

To: Chief Linda Speerstra

U. S. Department of the Army

From: Kauanoe Batangan, Senior Associate

Munekiyo Hiraga

Attachment:

Quantity

Date

Description

1

7/1/21

Early Consultation Letter

Message: Please refer to the attached.

Please contact us at Kauanoe at (808)244-2015, should you have any questions.

cc: Kari Luna Nunokawa, Munekiyo Hiraga

Michael Munekiyo, Munekiyo Hiraga

Yolanda Poouahi, Administrative Assistant

Email: yolanda@munekiyohiraga.com <mailto:yolanda@munekiyohiraga.com>

MUNEKIYO HIRAGA

Maui: 305 High Street, Suite 104, Wailuku, Hawaii 96793  T: 808.244.2015  F: 808.244.8729

Oahu: 735 Bishop Street, Suite 321, Honolulu, Hawaii 96813  T: 808.983.1233

Planning. Project Management. Sustainable Solutions.  www.munekiyohiraga.com
<Blockedhttp://www.munekiyohiraga.com/>

CONFIDENTIAL AND PRIVILEGED COMMUNICATION: This message (including attachments) is intended for the use of the designated recipient(s) named above. The contents of this correspondence are considered privileged and confidential. If you have received this message in error, kindly notify us immediately by email or telephone, and delete this email from your computer system. Thank you.

Due to the COVID-19 pandemic, if you have a document or package that must be delivered to our office via FedEx, UPS, or other courier service, please reach out to a MH team member to coordinate prior to sending.  We are committed to providing our clients excellent service to further project goals and objectives during these challenging times.  Please take care and stay safe.  Mahalo.

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

***Via email:*** ***Susan.A.Meyer@usace.army.mil***

Ms. Linda Speerstra, Chief
Attention: Susan Gayagas
U.S. Department of the Army
Regulatory Branch
U.S. Army Engineer District, Honolulu
Regulatory Branch, Building 230
Fort Shafter, Hawai‘i 96858-5440

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i (POH-2021-00136)

Dear Ms. Speerstra:

Thank for your email dated July 22, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provided the following responses to your comments.

***Comment****: Based on the July 1, 2021 early consultation request letter transmitted to our office, there is not enough information to provide project-specific comments. We request all aquatic resources that may occur on the project site be identified in the upcoming EA and that any proposed discharge of dredged or fill material into aquatic resources be quantified and coordinated with our Regulatory Office prior to work commencing to determine the jurisdictional status of the features and whether a DA permit is required.*

**Response:** There are no known aquatic resources occurring on the project site. We will be sure to note this in the Draft EA.

The DEM does not anticipate any discharge of dredged or fill material into aquatic resources. Should the project require dredge or fill to be placed into aquatic resources, the DEM will coordinate with your Regulatory Office prior to work commencing to determine

the jurisdictional status of the features and whether a DA permit is required.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\DOA.res.docx

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai‘i 96850


In Reply Refer To:
01EPIF00-2021-TA-0385

July 27, 2021

Kauanoe Batangan
Munekiyo Haraga
305 High Street, Suite 104
Wailuku, Hawai‘i 96793

Subject: Technical Assistance for Helene Hall Septic System Upgrades Hana, Maui

Dear Kauanoe Batangan:

Thank you for your recent correspondence requesting technical assistance on species biology, habitat, or life requisite requirements. The Pacific Islands Fish and Wildlife Office (PIFWO) of the U.S. Fish and Wildlife Service (Service) appreciates your efforts to avoid or minimize effects to protected species associated with your proposed actions. We provide the following information for your consideration under the authorities of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 *et seq*.), as amended.

Due to significant workload constraints, PIFWO is currently unable to specifically address your information request. The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. Based on your project location and description, we have noted the species most likely to occur within the vicinity of the project area, in the ‘**Occurs In or Near Project Area’** column. Please note this list is not comprehensive and should only be used for general guidance. We have added to the PIFWO website, located at https://www.fws.gov/pacificislands/promo.cfm?id=177175840 recommended conservation measures intended to avoid or minimize adverse effects to these federally protected species and best management practices to minimize and avoid sedimentation and erosion impacts to water quality. If your project occurs on the island of Hawai‘i, we have also enclosed our biosecurity protocol for activities in or near natural areas.

If you are representing a federal action agency, please request an official species list following the instructions at our PIFWO https://www.fws.gov/pacificislands/articles.cfm?id=149489558. You can find out if your project occurs in or near designated critical habitat here: https://ecos.fws.gov/ipac/.

Under section 7 of the ESA, it is the Federal agency's (or their non-Federal designee) responsibility to make the determination of whether or not the proposed project "may affect" federally listed species or designated critical habitat. A "may affect, not likely to adversely affect" determination is appropriate when effects to federally listed species are expected to be discountable (i.e., unlikely to occur), insignificant (minimal in size), or completely beneficial. This conclusion requires written concurrence from the Service. If a "may affect, likely to adversely affect" determination is made, then the Federal agency must initiate formal consultation with the Service. Projects that are determined to have "no effect" on federally listed species and/or critical habitat do not require additional coordination or consultation.

Implementing the avoidance, minimization, or conservation measures for the species that may occur in your project area will normally enable you to make a "may affect, not likely to adversely affect" determination for your project. If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats and defines measures to minimize and mitigate those adverse effects.

We appreciate your efforts to conserve endangered species. We regret that we cannot provide you with more specific protected species information for your project site. If you have questions that are not answered by the information on our website, you can contact PIFWO at (808) 792-9400 and ask to speak to the lead biologist for the island where your project is located.

Sincerely,

CHELSIE JAVAR-SALAS

Digitally signed by CHELSIE JAVAR-SALAS
Date: 2021.07.27 16:57:07 -10'00'

Island Team Manager
Pacific Islands Fish and Wildlife Office

Enclosures (3): Federal Status of Animal Species
Federal Status of Plant Species
Aquatic Best Management Practices

The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. For your guidance, we have marked species that may occur in the vicinity of your project, this list is not comprehensive and should only be used for general guidance.

**Enclosure 1.** Federal Status of Animal Species

| **Scientific Name** | **Common Name / Hawaiian Name** | **Federal Status** | **May Occur In Project Area** |
|---|---|---|---|
| **Mammals** | | | |
| *Lasiurus cinereus semotus* | Hawaiian hoary bat/‘ōpe‘ape‘a | E | ☒ |
| **Reptiles** | | | |
| *Chelonia mydas* | green sea turtle/honu - Central North Pacific distinct population segment (DPS) | T | ☒ |
| *Eretmochelys imbricata* | hawksbill sea turtle/ honu ‘ea or ‘ea | E | ☒ |
| **Birds** | | | |
| *Anas wyvilliana* | Hawaiian duck/koloa | E | ☐ |
| *Branta sandvicensis* | Hawaiian goose/nēnē | T | ☒ |
| *Fulica alai* | Hawaiian coot/‘alae ke‘oke‘o | E | ☒ |
| *Gallinula galeata sandvicensis* | Hawaiian gallinule/‘alae ‘ula | E | ☐ |
| *Himantopus mexicanus knudseni* | Hawaiian stilt/ae‘o | E | ☒ |
| *Oceanodroma castro* | band-rumped storm-petrel Hawai‘i DPS/‘akē‘akē | E | ☒ |
| *Pterodroma sandwichensis* | Hawaiian petrel/‘ua‘u | E | ☒ |
| *Puffinus auricularis newelli* | Newell’s shearwater/‘a‘o | T | ☒ |
| *Ardenna pacifica* | wedge-tailed shearwater/‘ua‘u kani | MBTA | ☐ |
| *Buteo solitarius* | Hawaiian hawk/‘io | MBTA | ☐ |
| *Gygis alba* | white tern/manu-o-kū | MBTA | ☐ |
| **Insects** | | | |
| *Manduca blackburni* | Blackburn’s sphinx moth | E | ☒ |
| *Megalagrion pacificum* | Pacific Hawaiian damselfly | E | ☐ |
| *Megalagrion xanthomelas* | orangeblack Hawaiian damselfly | E | ☐ |
| *Megalagrion nigrohamatum nigrolineatum* | blackline Hawaiian damselfly | E | ☐ |

| | | | |
|---|---|---|---|
| *Hylaeus anthracinus* | anthricinan yellow-faced bee | E | ☒ |
| *Hylaeus assimulans* | assimulans yellow-faced bee | E | ☒ |
| *Hylaeus facilis* | easy yellow-faced bee | E | ☒ |
| *Hylaeus hilaris* | hilaris yellow-faced bee | E | ☒ |
| *Hylaeus longiceps* | Hawaiian yellow-faced bee | E | ☒ |

**Enclosure 2.** Federal Status of Plant Species

| **Plants** | | | | |
|---|---|---|---|---|
| **Scientific Name** | **Common Name or Hawaiian Name** | **Federal Status** | **Locations** | **May Occur In Project Area** |
| *Abutilon menziesii* | koʻoloaʻula | E | O, L, M, H | ☐ |
| *Achyranthes splendens* var. *rotundata* | ʻewa hinahina | E | O | ☐ |
| *Bonamia menziesii* | no common name | E | K, O, L, M, H | ☐ |
| *Canavalia pubescens* | ʻāwikiwiki | E | Ni, K, L, M | ☐ |
| *Colubrina oppositifolia* | kauila | E | O, M, H | ☐ |
| *Cyperus trachysanthos* | puʻukaʻa | E | K, O | ☐ |
| *Gouania hillebrandii* | no common name | E | Mo, M | ☐ |
| *Hibiscus brackenridgei* | maʻo hau hele | E | O, Mo, L, M, H | ☐ |
| *Ischaemum byrone* | Hilo ischaemum | E | K, O, Mo, M, H | ☒ |
| *Isodendrion pyrifolium* | wahine noho kula | E | O, H | ☐ |
| *Marsilea villosa* | ʻihiʻihi | E | Ni, O, Mo | ☐ |
| *Mezoneuron kavaiense* | uhiuhi | E | O, H | ☐ |
| *Nothocestrum breviflorum* | ʻaiea | E | H | ☐ |
| *Panicum fauriei* var. *carteri* | Carter's panicgrass | E | Molokini Islet (O), Mo | ☐ |
| *Panicum niihauense* | lauʻehu | E | K | ☐ |
| *Peucedanum sandwicense* | makou | E | K, O, Mo, M | ☐ |
| *Pleomele* (*Chrysodracon*) *hawaiiensis* | halapepe | E | H | ☐ |
| *Portulaca sclerocarpa* | ʻihi | E | L, H | ☐ |
| *Portulaca villosa* | ʻihi | E | Le, Ka, Ni, O, Mo, M, L, H, Nihoa | ☐ |
| *Pritchardia affinis* (*maideniana*) | loulu | E | H | ☐ |

| | | | | |
|---|---|---|---|---|
| *Pseudognaphalium sandwicensium* var. *molokaiense* | ‘ena‘ena | E | Mo, M | ☐ |
| *Scaevola coriacea* | dwarf naupaka | E | Mo, M | ☐ |
| *Schenkia* (*Centaurium*) *sebaeoides* | ‘āwiwi | E | K, O, Mo, L, M | ☐ |
| *Sesbania tomentosa* | ‘ōhai | E | Ni, Ka, K, O, Mo, M, L, H, Necker, Nihoa | ☐ |
| *Tetramolopium rockii* | no common name | T | Mo | ☐ |
| *Vigna o-wahuensis* | no common name | E | Mo, M, L, H, Ka | ☐ |

Location key: O=O‘ahu, K=Kaua‘i, M=Maui, H=island of Hawai‘i, L=Lāna‘i, Mo=Moloka‘i, Ka=Kaho‘olawe, Ni=Ni‘ihau, Le=Lehua

## Enclosure 3

**U.S. Fish and Wildlife Service**
**Recommended Standard Best Management Practices**

The U.S. Fish and Wildlife Service (USFWS) recommends the following measures to be incorporated into project planning to avoid or minimize impacts to fish and wildlife resources. Best Management Practices (BMPs) include the incorporation of procedures or materials that may be used to reduce either direct or indirect negative impacts to aquatic habitats that result from project construction-related activities. These BMPs are recommended in addition to, and do not over-ride any terms, conditions, or other recommendations prepared by the USFWS, other federal, state or local agencies. If you have questions concerning these BMPs, please contact the USFWS Aquatic Ecosystems Conservation Program at 808-792-9400.

1. Authorized dredging and filling-related activities that may result in the temporary or permanent loss of aquatic habitats should be designed to avoid indirect, negative impacts to aquatic habitats beyond the planned project area.

2. Dredging/filling in the marine environment should be scheduled to avoid coral spawning and recruitment periods, and sea turtle nesting and hatching periods. Because these periods are variable throughout the Pacific islands, we recommend contacting the relevant local, state, or federal fish and wildlife resource agency for site specific guidance.

3. Turbidity and siltation from project-related work should be minimized and contained within the project area by silt containment devices and curtailing work during flooding or adverse tidal and weather conditions. BMPs should be maintained for the life of the construction period until turbidity and siltation within the project area is stabilized. All project construction-related debris and sediment containment devices should be removed and disposed of at an approved site.

4. All project construction-related materials and equipment (dredges, vessels, backhoes, silt curtains, etc.) to be placed in an aquatic environment should be inspected for pollutants including, but not limited to; marine fouling organisms, grease, oil, etc., and cleaned to remove pollutants prior to use. Project related activities should not result in any debris disposal, non-native species introductions, or attraction of non-native pests to the affected or adjacent aquatic or terrestrial habitats. Implementing both a litter-control plan and a Hazard Analysis and Critical Control Point

plan (HACCP – see https://www.fws.gov/policy/A1750fw1.html) can help to prevent attraction and introduction of non-native species.

5. Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to aquatic habitats and should be protected from erosion (*e.g.*, with filter fabric, etc.), to prevent materials from being carried into waters by wind, rain, or high surf.

6. Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained on site with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of accidental petroleum releases.

7. All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

October 17, 2022

Chelsie Javar-Salas, Island Team Manager
Fish and Wildlife Service
Pacific Island Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i (01EPIF00-2021-TA-0385)

Dear Ms. Javar-Salas:

Thank for your letter July 27, 2021 on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provided the following responses the following responses to your comments:

1. ***Comment:*** *Due to significant workload constraints, PIFWO is currently unable to specifically address your information request. The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. Based on your project location and description, we have noted the species most likely to occur within the vicinity of the project area, in the 'Occurs In or Near Project Area' column. Please note this list is not comprehensive and should only be used for general guidance. We have added to the PIFWO website, located at https://www.fws.gov/pacificislands/promo.cfm?id=177175840 recommended conservation measures intended to avoid or minimize adverse effects to these federally protected species and best management practices to minimize and avoid sedimentation and erosion impacts to water quality. If your project occurs on the island of Hawai'i, we have also enclosed our biosecurity protocol for activities in or near natural areas.*

**Response:** Thank you for the list of species most likely to occur within the vicinity of the project area. The DEM will utilize the applicable conservation measures and Best Management Practices (BMPs) provided to avoid or minimize adverse effects to the noted species and their habitats.

Please note that a Flora and Fauna study was conducted for the proposed project in April 2021. The complete Flora and Fauna Study will be included in the Draft EA. All parts of the project area within the corridor were covered. A 40-foot wide corridor was assessed along

the 1,200 foot long route. In addition, an evening visit was made to the area to record crepuscular activities and vocalizations to see if there were any evidence of the endangered Hawaiian hoary bat.

**Flora**: The study concluded that the vegetation throughout the project corridor is comprised almost entirely of non-native species that are of no special interest or concern. No federally Endangered or Threatened plant species (USFWS, 2021) were found in the project area, nor were any found that are candidates for such status. No special plant habitats were found here either.

**Fauna:** The study found that the fauna within this project area is primarily non-native in character. Just one (1) indigenous native bird species, the kōlea, was recorded. It was noted that there are two (2) species of protected seabirds, the endangered ‘ua‘u or Hawaiian petrel (*Pterodroma sandwichensis*) and the threatened ‘a‘o or Newell’s shearwater (*Puffinus newelli*), that nest in burrows high in the mountains. They would not physically land in the project area but do fly over the coastal lowlands to and from their burrows at dusk and at dawn, respectively. Young fledglings in particular can be drawn to and confused by bright lights and crash into or around light structures with fatal results. As such, outdoor lighting associated with this project will be shielded and downward facing to mitigate this threat.

In addition to the conservation measures and BMPs mentioned above from the Flora and Fauna Study, the General Contractor for the project will comply with all applicable provisions of the Hawai‘i Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control."

**2.** ***Comment:*** *If you are representing a federal action agency, please request an official species list following the instructions at our PIFWO https://www.fws.gov/pacificislands/articles.cfm?id=149489558. You can find out if your project occurs in or near designated critical habitat here: https://ecos.fws.gov/ipac/.*

*Under section 7 of the ESA, it is the Federal agency's (or their non-Federal designee) responsibility to make the determination of whether or not the proposed project "may affect" federally listed species or designated critical habitat. A "may affect, not likely to adversely affect" determination is appropriate when effects to federally listed species are expected to be discountable (i.e., unlikely to occur), insignificant (minimal in size), or completely beneficial. This conclusion requires written concurrence from the Service. If a "may affect, likely to adversely affect" determination is made, then the Federal agency must initiate formal consultation with the Service. Projects that are determined to have "no effect" on federally listed species and/or critical habitat do not require additional coordination or consultation.*

**Response:** The project will not utilize any federal funding for this project and therefore is not subject to Section 7 of the ESA.

**3.** ***Comment:*** *Implementing the avoidance, minimization, or conservation measures for the species that may occur in your project area will normally enable you to make a "may affect, not likely to adversely affect" determination for your project. If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats and defines measures to minimize and mitigate those adverse effects.*

**Response:** If required, the DEM will obtain an incidental take permit under Section 10(a)(1)(B) of the Endangered Species Act.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\USFWS.docx

JUL 26 2021

DAVID Y. IGE
GOVERNOR OF HAWAII

ELIZABETH A. CHAR, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
Maui District Health Office
54 South High St. Rm. #301
Wailuku, HI 96793

Lorrin W. Pang, M.D., M.P.H.
District Health Officer

July 16, 2021

Mr. Kauanoe Batangan
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Batangan:

**Subject: Early Consultation for Proposed Helene Hall Septic System Improvements, Hana, Hawaii**
**TMK Nos.: (2) 1-4-004:034 and (2) 1-4-004:029 (por.)**

Thank you for the opportunity to review this project. We have the following comments to offer:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage may be required for this project. The Clean Water Branch should be contacted at 808 586-4309.

2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR) Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please contact the Indoor & Radiologic Health Branch at 808 586-4700.

3. The project shall meet all applicable requirements of Individual Wastewater System design and specification of the HAR, Chapter 11-62, Wastewater Systems. If you have any questions, please contact Roland Tejano, Environmental Engineer, at 808 984-8232.

It is strongly recommended that you review the department's website at https://health.hawaii.gov/epo/landuse/ and contact the appropriate program that concerns your project.

Should you have any questions, please contact me at 808 984-8230 or email me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

Patti Kitkowski

Patti Kitkowski
District Environmental Health Program Chief

c Joanna L. Seto, P.E. {Via Email}

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

October 17, 2022

Patti Kitkowski, District Environmental Health Program Chief
State of Hawai‘i
Department of Health
Maui District Office
54 South High Street, Room #301
Wailuku, Hawai‘i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Ms. Kitkowski:

Thank for your letter dated July 16, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we provide the following responses to the comments in your letter.

1. ***Comment:*** *National Pollutant Discharge Elimination System (NPDES) permit coverage may be required for this project. The Clean Water Branch should be contacted at 808 586-4309.*

   **Response:** Should an NPDES permit be required, it will be secured prior to commencement of the project construction.

2. ***Comment:*** *The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawai‘i Administrative Rules (HAR) Chapter 11-46, “Community Noise Control”. A noise permit may be required and should be obtained before the commencement of work. Please contact the Indoor & Radiologic Health Branch at 808 586-4700.*

   **Response:** The project will comply with HAR Chapter 11-46, “Community Noise Control”.

   Should a noise permit be required, it will be secured prior to the commencement of work.

**3.** ***Comment:*** *The project shall meet all applicable requirements of Individual Wastewater System design and specification of the HAR, Chapter 11-62, Wastewater Systems. If you have any questions, please contact Roland Tejano, Environmental Engineer, at 808 984-8232.*

**Response:** The project will meet all applicable requirements of the Individual Wastewater System design and specification of the Hawai'i Administrative Rules (HAR), Chapter 11-62, Wastewater Systems.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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# Solid and Hazardous Waste Branch Standard Comments

November 26, 2018

The Solid and Hazardous Waste Branch administers programs in the areas of:

1) Management of hazardous waste;
2) Management of solid waste; and
3) Regulation of underground storage tanks.

Our general comments on projects are below. For further information about these programs, please contact the Solid and Hazardous Waste Branch at (808) 586-4226. All chapters of the Hawaii Revised Statutes (HRS) are at https://www.capitol.hawaii .gov/hrscurrent/.

**Hazardous Waste Program**

- The state regulations for hazardous waste and used oil are in chapters 11-260.1 to 11-279.1, Hawaii Administrative Rules (HAR) [http://health.hawaii.go v/shwb/hwrules/]. These rules apply to the identification, handling, transportation, storage and disposal of regulated hazardous waste and used oil. Generators, transporters and treatment, storage, and disposal facilities of hazardous waste and used oil must adhere to these requirements. Violations are subject to penalties under chapter 342J, HRS.

**Solid Waste Section**

- The Solid Waste Section (SWS) enforces laws and regulations contained in chapters 342H and 3421, HRS, and chapter 11-58.1, HAR, "Solid Waste Management Control". [http://health.hawaii .gov/shwb/solid-waste/].

- The purpose of the rules is to establish minimum standards governing the design, construction, installation, operation, and maintenance of solid waste disposal, recycling, reclamation and transfer systems.

- All facilities that accept solid wastes are required to obtain a solid waste management permit from the SWS. Examples of the types of facilities governed by these regulations include landfills, transfer stations and convenience centers, recycling facilities, composting facilities, and salvage facilities. Medical waste, infectious waste, and foreign waste treatment facilities are also included.

- Generators of solid waste are required to ensure that their wastes are properly delivered to permitted solid waste management facilities. Managers of construction and demolition projects should require their waste contractors to submit disposal receipts and invoices to ensure proper disposal of wastes.

**Solid and Hazardous Waste Branch Standard Comments**

- Chapter 342G, HRS, encourages the reduction of waste generation, reuse of discarded materials, and the recycling of solid waste. The project developer is highly encouraged to develop a solid waste management plan to ensure proper handling of wastes and divert recyclables from being landfilled. Ideally, the plan would seek to maximize waste diversion and minimize disposal. Such plans should include designated areas to promote the collection of reusable and recyclable materials.

**Office of Solid Waste Management**

- The Office of Solid Waste Management (OSWM) administers statewide integrated solid waste management planning activities, which apply to the counties, as well as various recycling programs, e.g. the Glass Advance Disposal Fee (ADF) and Deposit Beverage Container (DBC) Programs. Management of the DBC Program is conducted pursuant to chapter 342G, HRS, which contains compliance and enforcement provisions, and chapter 11-282, HAR, "Deposit Beverage Recycling" [http://health.hawaii.gov/hi5/rules-regulations-additional- links/]. OSWM is also responsible for limited enforcement and compliance of solid waste management facilities that operate primarily as certified DBC redemption centers pursuant to chapter 342H, HRS, and chapter 11-58.1, HAR, "Solid Waste Management Control" [http://health.hawaii.gov/shwb/solid-waste/]. Authority for the integrated solid waste management planning and ADF programs is contained in chapter 342G, HRS.

- Glass Advance Disposal Fee Program: Businesses that import glass containers into Hawaii are required to register with the Department of Health and pay a 1.5 cent per container fee. Fee revenue is distributed to the counties for the operation of glass recycling programs.

- Deposit Beverage Container Program: Business that manufacture or import deposit beverage containers into Hawaii are required to register with the Department of Health and pay the five-cent deposit and one cent container fee on each deposit container. Deposits and fees are deposited into a special fund and are used to reimburse DBC redemption center refunds paid to consumers; and to pay handling fees to redemption/recycling companies to process and recycle collected deposit beverage containers; and to pay program administrative costs.

- The Department of Health reimburses and pays an associated handling fee for the redemption of deposit beverage containers (DBC). These transactions are conducted only with certified redemption centers. Certification requires obtaining a solid waste management permit from the SWS (which addresses environmental issues) and a certification from the DBC program (which standardizes the redemption process).

- Chapter 342G, HRS, encourages the reduction of waste generation, reuse of discarded materials, and the recycling of solid waste. Businesses, property managers and developers, and government entities are highly encouraged to develop solid waste management plans to ensure proper handling of wastes and divert recyclables from being landfilled. The project developer is highly encouraged to develop a solid waste management plan to ensure proper handling of wastes and divert recyclables from being landfilled. Ideally, the plan would seek to

maximize waste diversion and minimize disposal. Such plans should include designated areas to promote the collection of reusable and recyclable materials.

- Solid waste management plans seek to maximize waste diversion and minimize disposal. Such plans should include designated areas to promote the collection of reusable and recyclable materials.

**Underground Storage Tank Program**

- The state's underground storage tank (UST) regulations, found in chapter 11-280.1, HAR [http://health.hawaii.gov/shwb/underground-storage-tanks/], include specific requirements that UST owners and operators must meet when installing, operating, and permanently closing their UST systems and addressing releases from USTs. Violations are subject to penalties under chapter 11-280.1, HAR, and chapter 342L, HRS.

- A permit is required prior to the installation and operation of a UST. Any new UST system that will be installed must have secondary containment with interstitial monitoring. Refer to subchapters 2, 3, 4, and 12 of chapter 11-280.1, HAR. The installation permit expires 1 year from the date of issuance. The operation permit expires 5 years from the date of issuance.

- §11-280.1-50, HAR, requires owners and operators of USTs or tank systems to notify DOH within twenty-four (24) hours and follow the procedures in§ 11-280.1-52, HAR, if any of the following occur, with specific exceptions found in the rules:
  1) The discovery by any person of evidence of regulated substances which may have been released at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, or nearby surface water);
  2) Unusual UST system operating conditions observed or experienced (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST, or an unexplained presence of water in the tank); or
  3) Monitoring results from a release detection method required under §§11-280.1-41 or 11-280 .1-42 indicate a release may have occurred.

- For release response actions, responsible parties and their consultants and contractors should follow the applicable guidance in the Department of Health Hazard Evaluation Emergency (HEER) Office Technical Guidance Manual, HEER Environmental Action Level (EAL) guidance, and other guidance documents on the DOH HEER Office website [http://eha-web.doh.hawaii.gov /eha-cma/Org/HEER/], including those pertaining to Multi-Increment Sampling of soil, low flow groundwater sampling, soil vapor sampling, and Environmental Hazard Evaluations (EHE)/Environmental Hazard Management Plans (EHMP).

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

MUNEKIYO HIRAGA
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October 17, 2022

State of Hawai‘i
Department of Health
Solid and Hazardous Waste Branch
Hawai‘i Department of Health
2827 Waimano Home Road, #100
Pearl City, Hawai‘i 96782

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

To Whom It May Concern:

Thank for your letter postmarked July 17, 2021, on the subject project. The Department of Health, Solid and Hazardous Waste Branch standard comments have been forwarded to the applicant, the County of Maui, Department of Environmental Management, for review. All applicable laws and regulations will be complied with.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
DIRECTOR

Deputy Director
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

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

IN REPLY REFER TO:
DIR 0661
HWY-PS 2.6124

July 28, 2021

**VIA EMAIL:** planning@munekiyohiraga.com

Mr. Kauanoe Batangan
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Batangan:

Subject: Request for Comments for Early Consultation
Helene Hall Septic System Improvement
Keawa Place – Hana, Maui, Hawaii
Tax Map Key Nos.: (2) 1-4-004: 034 and 1-4-004: 029 (Portion)

Thank you for your letter dated July 1, 2021, requesting for our early consultation on the preparation of a Draft Environmental Assessment (DEA) required by Hawaii Revised Statutes Chapter 343 due to the use of State lands and County funds. This project will be tied to an upcoming application for a Special Management Area Permit and a Shoreline Setback Variance.

The proposed request is for an upgrade to an existing wastewater and treatment disposal system at Helene Hall owned by the County of Maui. The proposed work includes rehabilitation of two Aerobic Treatment Units and two effluent disposal cesspools.

The proposed work will also involve connecting the wastewater from Helene Hall to a new wastewater treatment system through an underground force main totaling 1,500 feet. This will be located along the right-of-way (ROW) on Keawa Place, a State-owned roadway and Uakea Road, a County roadway.

The Hawaii Department of Transportation (HDOT) has the following comments:

1. The DEA should provide an evaluation on whether the proposed project will have any adverse effects on the State-owned Keawa Place.

2. The DEA should discuss Best Management Practices to prevent any water runoff on the State-owned Keawa Place.

3. Construction plans approved by the HDOT Highways Division and a Use and Occupancy permit application is required for any work, or use of any portion of the State ROW.

If you have any questions, please contact Jeyan Thirugnanam, Systems Planning Engineer, Highways Division, Planning Branch at (808) 587-6336 or by email at Jeyan.Thirugnanam@hawaii.gov. Please reference file review number PS 2020-120.

Sincerely,

JADE T. BUTAY
Director of Transportation

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Jade Butay, Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i (DIR 0661)(HWY-PS 2.6124)

Dear Mr. Butay:

Thank for your letter dated July 28, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we provide the following in response to your comments.

1. ***Comment:*** *The Draft EA should provide an evaluation on whether the proposed project will have any adverse effects on the State-owned Keawa Place.*

   **Response:** The Draft Environmental Assessment (EA) will provide an evaluation on whether the proposed project will have any adverse effects on the State-owned Keawa Place.

2. ***Comment:*** *The Draft EA should discuss Best Management Practices to prevent any water runoff on the State-owned Keawa Place.*

   **Response:** The Draft EA will discuss Best Management Practices to prevent any water runoff on the State-owned Keawa Place.

3. ***Comment:*** *Construction plans approved by the HDOT Highways Division and a Use and Occupancy permit application is required for any work, or use of any portion of the State right-of-way.*

   **Response:** Construction plans approved by the State of Hawai'i, Department of Transportation, Highways Division and a Use and Occupancy permit will be obtained prior to any work in the State-owned, Keawa Place right-of-way.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM\:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

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

OFFICE OF FACILITIES AND OPERATIONS

July 22, 2021

Kauanoe Batangan
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Re: Early Consultation for the Helene Hall Septic System Improvements
Hana, Maui, Hawaii TMK (2)1-4-004:029 por. and (2)1-4-004:034

Dear Mr. Kauanoe:

Thank you for your letter dated July 1, 2021. The Hawaii State Department of Education (HIDOE) has the following early consultation comments for the preparation of a Draft Environmental Assessment for the proposed Helene Hall Septic System Improvements (Project) located at Hana, Island of Maui, TMK (2)1-4-004:029 por. and (2)1-4-004:034.

Based upon the information provided, the Project will not impact HIDOE schools.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, School Lands and Facilities Specialist, Facilities Development Branch, Planning Section, at 784-5093 or by email at robyn.loudermilk@k12.hi.us.

Sincerely,

Roy Ikeda
Interim Public Works Manager
Planning Section

RI:rll

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Roy Ikeda, Interim Public Works Manager, Planning Section
State of Hawai‘i
Department of Education
P.O. Box 2360
Honolulu, Hawai‘i 96804

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Mr. Ikeda:

Thank you for your letter dated July 22, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we acknowledge that the State of Hawai‘i, Department of Education (HIDOE), based on the information provided, does not anticipate that the project will impact any HIDOE schools.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y. K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\DOE.res.docx

Maui: 305 High Street, Suite 104 • Wailuku, Hawaii 96793 • Tel: 808.244.2015 • Fax: 808.244.8729
Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

JUL 16 2021

DAVID Y. IGE
GOVERNOR

CURT T. OTAGURO
COMPTROLLER

AUDREY HIDANO
DEPUTY COMPTROLLER

**STATE OF HAWAII**
**DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES**
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)21.131

JUL 12 2021

Mr. Kauanoe Batangan
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

Dear Mr. Batangan:

Subject: Early Consultation Request for the Proposed Helene Hall Septic System Improvements, Hana, Maui, Hawaii
TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.)

Thank you for the opportunity to comment on the subject project. We have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may call Ms. Dora Choy of the Planning Branch at 586-0488.

Sincerely,

CHRISTINE L. KINIMAKA
Public Works Administrator

DC:mo
c: Mr. Wade Shimabukuro, DAGS-MDO

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Christine Kinimaka, Public Works Administrator
State of Hawai'i
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawai'i 96810-0119

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i ((P)21.131)

Dear Ms. Kinimaka:

Thank for your letter dated July 12, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we acknowledge that the Department of Accounting and General Services (DAGS) has no comments to offer at this time as the proposed project does not impact any of DAGS' projects or existing facilities.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\DAGS.res.docx

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 22, 2021

Munekiyo Hiraga
Attn: Ms. Kauanoe Batangan
305 High Street, Suite 104
Wailuku, Hawaii 96793

via email: planning@munekiyohiraga.com

Dear Ms. Batangan:

SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements** located at Hana, Island of Maui; TMKs: (2) 1-4-004:034 and (2) 1-4-004:029 (por.) on behalf of County of Maui, Department of Environmental Management

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Division of Aquatic Resources, (b) Engineering Division, (c) Office of Conservation & Coastal Lands, and (d) Land Division – Maui District on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 9, 2021

**MEMORANDUM**

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMK: (2) 1-4-004:034 and (2) 1-4-004:029 (por.)
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **July 21, 2021.**

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

( ✓ ) We have no objections. BCS
( ) We have no comments.
( ) We have no additional comments.
( ✓ ) Comments are attached. BCS

Signed: _____
Print Name: Brian J. Neilson- Administrator
Division: Division of Aquatic Resources
Date: Jul 13, 2021

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

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

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**DIVISION OF AQUATIC RESOURCES**
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

Date: 7/13/2021
DAR # AR0091

MEMORANDUM

TO: Brian J. Neilson
DAR Administrator

FROM: Russell Sparks, Aquatic Biologist

SUBJECT: Early Consultation Request for the Proposed Helene Hall Septic System Improvements

Request Submitted by: Russell Y. Tsuji, Land Administrator

Location of Project: Hana, Island of Maui; TMK:(2) 1-4-004:034 and (2) 1-4-004:029

Brief Description of Project:

The County of Maui plans to upgrade and repair two on-site aerobic treatment units (ATUs) near Hana Bay in Hana Maui. Plans call for repairing one ATU with a new aeration blower and then to re-purpose the other one as a wastewater pump station. The wastewater would then be pumped uphill to the Hana Ball Park, where it could be connected with an existing treatment system and absorption field.

Comments:

☐ No Comments ☒ Comments Attached

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

Comments Approved: _____ Date: Jul 13, 2021
Brian J. Neilson
DAR Administrator

DAR# AR0091

Comments

The Maui Office of the Division of Aquatic Resources has worked for many years to bring attention to concerns over sewage treatment and disposal systems that allow wastewater to leach into our coastal waters. We are therefore, very pleased to see that the County of Maui is proposing to move the wastewater from the Helene Hall restrooms uphill and away from the immediate proximity of Hana Bay. By moving this water up to the Hana Ball Park, it can be safely leached into the ground. This action will allow for various natural processes to treat this wastewater as it slowly works its way into the ground and as a result, it should help to significantly reduce bacteria and nutrient loads to the near-shore waters of this area. We look forward to seeing this project move forward and encourage these types of improvements for all similar wastewater systems along Maui County's coastlines.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 9, 2021

**MEMORANDUM**

FROM:

~~TO:~~ **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
___Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
___Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

TO:

~~FROM:~~ Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMK: (2) 1-4-004:034 and (2) 1-4-004:029 (por.)
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **July 21, 2021.**

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
( ) We have no additional comments.
(✓) Comments are attached.

Signed: _____
Print Name: Carty S. Chang, Chief Engineer
Division: Engineering Division
Date: Jul 14, 2021

Attachments
cc: Central Files

**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**ENGINEERING DIVISION**

**LD/Russell Y. Tsuji**
**Ref: Early Consultation Request for the Proposed Helene Hall Septic System Improvements**
**Location: Hana, Island of Maui**
**TMK(s): (2) 1-4-004:034 and (2) 1-4-004:029 (por.)**
**Applicant: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management**

**COMMENTS**

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: Jul 14, 2021

MA-22-08

DAVID Y. IGE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION
2021 JUL 14 AM 10:49
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
OFFICE OF CONSERVATION AND COASTAL LANDS
2021 JUL 12 A 8:44
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 9, 2021

**MEMORANDUM**

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMK: (2) 1-4-004:034 and (2) 1-4-004:029 (por.)
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **July 21, 2021.**

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
( ✓ ) We have no additional comments.
( ✓ ) Comments are attached.

Signed: [signature]
Print Name: Rachel Beasley
Division: OCCL
Date: 7/13/21

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
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LAND
STATE PARKS

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**OFFICE OF CONSERVATION AND COASTAL LANDS**
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

REF: OCCL: RB

COR: MA-22-1
July 12, 2021

Kauanoe Batangan, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, HI 96793

**SUBJECT:** Early Consultation for the Proposed Helene Hall Septic System Improvements
Hana Village, Hana, Maui, Hawaii
TMK(s): (2) 1-4-004:034 & (2) 1-4-004:029 (por.)

Dear Mr. Batangan:

The Office of Conservation and Coastal Lands (OCCL) is in receipt of your correspondence regarding the subject project. The County of Maui, Department of Environmental Management is proposing to upgrade the wastewater reclamation system at Helene Hall and relocate it by the Hana Ball Park parking lot. The OCCL regulates land uses in the State Land Use Conservation District and both TMKs do not appear to be in this District. Therefore, the proposed project does not appear to be in the OCCL's jurisdiction.

Should you have any questions, please feel free to contact Rachel Beasley of the Office of Conservation and Coastal Lands at 587-0386.

Sincerely,

Michael Cain for Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

*cc:* County of Maui, Planning Department
County of Maui, Department of Environmental Management
MDLO

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 9, 2021

**MEMORANDUM**

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMK: (2) 1-4-004:034 and (2) 1-4-004:029 (por.)
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **July 21, 2021.**

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
(X) We have no comments.
( ) We have no additional comments.
( ) Comments are attached.

Signed: [signature]
Print Name: Daniel Ornellas
Division: MDLO
Date: 7/19/21

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 5, 2021

Munekiyo Hiraga
Attn: Ms. Kauanoe Batangan
305 High Street, Suite 104
Wailuku, Hawaii 96793

via email: planning@munekiyohiraga.com

Dear Ms. Batangan:

SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements** located at Hana, Island of Maui; TMKs: (2) 1-4-004:034 and (2) 1-4-004:029 (por.) on behalf of County of Maui, Department of Environmental Management

Thank you for the opportunity to review and comment on the subject matter. In addition to our previous comments dated July 22, 2021, enclosed are comments from the Division of Forestry and Wildlife on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 9, 2021

**MEMORANDUM**

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Early Consultation Request for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMK: (2) 1-4-004:034 and (2) 1-4-004:029 (por.)
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **July 21, 2021.**

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
( ) We have no additional comments.
(☑) Comments are attached.

Signed: [signature]
Print Name: DAVID G. SMITH, Administrator
Division: Division of Forestry and Wildlife
Date: Aug 4, 2021

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

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

**STATE OF HAWAII**
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

August 4, 2021

**MEMORANDUM** *Log no. 3249*

**TO:** RUSSEL Y. TSUJI, Administrator
Land Division

**FROM:** DAVID G. SMITH, Administrator
Division of Forestry and Wildlife

**SUBJECT: Division of Forestry and Wildlife Comments Request for Early Consultation for the Proposed Helene Hall Septic System Improvements**

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your inquiry regarding early consultation on the proposed Helene Hall septic system improvements in Hāna on Maui, Hawaiʻi, TMKs: (2) 1-4-004:034 and (2) 1-4-004:029 (por.). The project consists of (1) the installation of a new blower and shelter to pump air into a rehabilitated Aerobic Treatment Unit (ATU) and conversion of another, existing ATU at Helene Hall into a wastewater pump station, (2) installation of an underground force main along Keawa Place and Uakea Road, and (3) installation of a new treatment system and absorption field under the Hāna Ball Park parking lot.

The State listed Hawaiian Hoary Bat or ʻŌpeʻapeʻa (*Lasiurus cinereus semotus*) could potentially occur in the vicinity of the project area and may roost in nearby trees. If any site clearing is required this should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). During this period, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed.

The state endangered Hawaiian Monk Seal (*Monachus schauinslandi*) and threatened Green Sea Turtle (*Chelonia mydas*) may potentially occur or haul out on shore within the vicinity of the proposed project site. If either species is detected within 100 meters of the project area (specifically Helene Hall) all nearby construction operations should cease and not continue until the focal animal has departed the area on its own accord.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing disorientation. This disorientation can result in collision with manmade artifacts or grounding of birds. For nighttime work that might be required, DOFAW recommends that all lighting be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open ocean. For

illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawai‘i please visit: https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf.

DOFAW recommends minimizing the movement of plant or soil material between worksites, such as in fill. Soil and plant material may contain invasive fungal pathogens, vertebrate and invertebrate pests (e.g. Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm our native species and ecosystems. We recommend consulting the Maui Invasive Species Committee at (808) 573-6472 in planning, design, and construction of the project to learn of any high-risk invasive species in the area and ways to mitigate spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

DOFAW likewise recommends using native plant species for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW recommends consulting the Hawai‘i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (https://sites.google.com/site/weedriskassessment/home).

We appreciate your efforts to work with our office for the conservation of our native species. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 587-0010 or paul.m.radley@hawaii.gov.

Sincerely,

DAVID G. SMITH
Administrator

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Russell Tsuji, Land Administrator
State of Hawai'i
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i

Dear Mr. Tsuji:

Thank for your letters dated July 22, 2021, and August 5, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to the comments listed by the divisions as follows:

***Division of Aquatic Resources***

***1.*** ***Comment:*** *We have no objections.*

**Response:** We acknowledge that the Department of Land and Natural Resources (DLNR), Division of Aquatic Resources, has no objections to the proposed action.

***Engineering Division***

**2.** ***Comment:*** *The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (highrisk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.*

*The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project.*

**Response:** The proposed project will comply with the rules and regulations of the National Flood Insurance Program, Title 44 of the Code of Federal Regulations, and any applicable local flood ordinances.

***Office of Conservation and Coastal Lands***

***3.*** ***Comment:*** *The OCCL regulates land uses in the State Land Use Conservation District and both TMKs do not appear to be in this District. Therefore, the proposed project does not appear to be in the OCCL's jurisdiction.*

**Response:** We acknowledge that the proposed project does not appear to be in the OCCL's jurisdiction.

***Land Division – Maui District***

***4.*** ***Comment:*** *We have no comments.*

**Response:** We acknowledge that DLNR, Land Division - Maui District, has no comments regarding the proposed action.

***Division of Forestry and Wildlife***

***5.*** ***Comment:*** *The State listed Hawaiian Hoary Bat or ʻŌpeʻapeʻa (Lasiurus cinereus semotus) could potentially occur in the vicinity of the project area and may roost in nearby trees. If any site clearing is required this should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). During this period, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed.*

**Response:** It is noted that the State listed Hawaiian Hoary Bat or ʻŌpeʻapeʻa (*Lasiurus cineereus semotus*) could potentially occur in the vicinity of the project area and may roost in nearby trees.

The proposed action will occur within State and County roadway rights-of-way as well as an existing open field area. Clearing of trees are not a part of the project scope.

***6.*** ***Comment:*** *The state endangered Hawaiian Monk Seal (Monachus schauinslandi) and threatened Green Sea Turtle (Chelonia mydas) may potentially occur or haul out on shore within the vicinity of the proposed project site. If either species is detected within 100 meters of the project area (specifically Helene Hall) all nearby construction operations should cease and not continue until the focal animal has departed the area on its own accord.*

**Response:** The applicant acknowledges that the Hawaiian Monk Seal and Green Sea Turtle may occur or haul out on shore within the vicinity of the proposed project site. If either species is detected within 100 meters of the project area, all nearby construction operations will cease and will not continue until the focal animal has departed the area on its own accord.

7. ***Comment:*** *Artificial lighting can adversely impact seabirds that may pass through the area at night by causing disorientation. This disorientation can result in collision with manmade artifacts or grounding of birds. For nighttime work that might be required, DOFAW recommends that all lighting be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open ocean.*

**Response:** The project is not anticipating to conduct any nighttime work. However, should any artificial lighting be required, it will be shielded and downward facing to minimize potential impacts to seabirds.

8. ***Comment:*** *DOFAW recommends minimizing the movement of plant or soil material between worksites, such as in fill. Soil and plant material may contain invasive fungal pathogens, vertebrate and invertebrate pests (e.g. Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm our native species and ecosystems. We recommend consulting the Maui Invasive Species Committee at (808) 573-6472 in planning, design, and construction of the project to learn of any high-risk invasive species in the area and ways to mitigate spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.*

**Response:** Construction personnel will minimize the movement of plant or soil material between worksites. All equipment, materials, and personnel will be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

9. ***Comment:*** *DOFAW likewise recommends using native plant species for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.) Please do not plant invasive species.*

**Response:** No invasive species will be planted as part of the project. Landscaping will be limited to the removal and replacement of grass at the Hāna Ball Park where the new treatment system will be installed.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\DLNR-ALL.docx

# STATE OF HAWAII
# OFFICE OF PLANNING
# & SUSTAINABLE DEVELOPMENT

DAVID Y. IGE
GOVERNOR

Mary Alice Evans
DIRECTOR

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/


DTS 202107161444HE

July 26, 2021

Mr. Kauanoe Batangan
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaiʻi 96793

Dear Mr. Batangan:

Subject: Early Consultation Request for the Proposed Helene Hall Septic System Improvements; TMK: (2) 1-4-004: 034 and (2) 1-4-004: 029 (por); Hāna, Maui, Hawaiʻi

Thank you for the opportunity to provide comments on the early-consultation request for the preparation of a Draft Environmental Assessment (Draft EA) for the Helene Hall Septic System Improvement project. The pre-consultation review material was transmitted to our office via letter dated July 1, 2021.

It is our understanding that the County of Maui, Department of Environmental Management (DEM) intends to make upgrades to the wastewater reclamation system at Helene Hall in Hāna, Maui, and relocate it to the Hāna Ball Park parking. The project also calls for wastewater improvements along the rights-of-way of Keawa Place and Uakea Road.

The project will rehabilitate one aerobic treatment unit with a new aeration blower and will repurpose the other as a wastewater pump station. Wastewater will then be pumped uphill from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park. The wastewater from Helene Hall will be connected to the treatment system and absorption field at Hāna Ball Park parking lot via an underground force main.

The Office of Planning & Sustainable Development has reviewed the transmitted material and has the following comments to offer:

1. <u>Hawaiʻi Coastal Zone Management (CZM) Program</u>
   The CZM area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (Hawaiʻi Revised Statutes (HRS) § 205A-1). Therefore by this definition, the project site is within the CZM area for the State of Hawaiʻi.

   Pursuant to HRS § 205A-4, in implementing the objectives of the CZM program, agencies shall consider ecological, cultural, historic, esthetic, recreational, scenic, open space values,

coastal hazards, and economic development. As this project is being proposed by a government agency, the Draft EA should ensure the proposed actions are consistent with the objectives and supporting policies of the Hawaii CZM Program, HRS § 205A-2, as amended. Compliance with HRS § 205A-2 is an important component for satisfying the requirements of HRS Chapter 343.

2. Special Management Area (SMA)
Given that the subject Environmental Assessment (EA) may serve as a supporting document for the SMA Use Permit application, we recommend that the EA specifically discuss the compliance with the requirements of SMA use and shoreline setbacks by consulting with the County of Maui Planning Department. We note that public shoreline hardening structures, including seawalls and revetments, shall be minimized at sites with beaches pursuant to HRS § 205A-2(c)(9)(C), as amended, enacted by Act 16, Session Laws of Hawaii 2020.

Furthermore, the Draft EA should provide a regional location map and include the project site's proximity and relation to the designated SMA boundary.

3. Shoreline Setback
According to the subject pre-consultation request, some of the improvements along Keawa Place will occur within the shoreline setback area. The Draft EA should consult with the County of Maui Planning Department for determination of the shoreline area as defined in HRS § 205A-41. The Draft EA should include any options to the proposed action to avoid siting structure within the shoreline area. A shoreline setback variance may be granted if the county authority finds in writing, based on the record presented, that the proposed structure is necessary for or ancillary to facilities or improvements by public agencies or public utilities regulated under HRS Chapter 269.

4. Climate Change / Sea Level Rise (SLR)
SLR increases the risk of flooding, storm surges, and coastal erosion. This project involves a septic system and wastewater that is potentially harmful to the nearshore waters of Hāna Bay. Therefore, it is imperative that the Draft EA assess the vulnerability of the septic system, and its associated infrastructure, to SLR related threats common to coastal regions such as coastal inundation, storm surges, or shoreline erosion. We suggest the Draft EA refer to the findings of the Hawai‘i Sea Level Rise Vulnerability and Adaptation Report 2017, accepted by the Hawai‘i Climate Change Mitigation and Adaptation Commission.

The Report, and Hawai‘i Sea Level Rise Viewer at https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ particularly identifies a 3.2-foot sea level rise exposure area across the main Hawaiian Islands, including the island of Maui, which may occur in the mid to latter half of the 21st century. The Draft EA should provide a map of 3.2-foot sea level rise exposure area in relation to the project area, and consider site-

specific mitigation measures if necessary, to respond to the potential impacts of 3.2-foot sea level rise on the proposed development.

We acknowledge that proposed project does relocate structures further inland, thereby reducing the risks from sea level rise. A portion of proposed activity describes the conversion of one existing non-functioning ATU to a wastewater pump station. We suggest that the Draft EA includes a discussion relating to the risks of this proposed activity from SLR and saltwater intrusion that may pollute to ocean waters due to the proximity to the shoreline and consider site-specific mitigation measures to mitigate such impacts.

5. Stormwater Runoff, Erosion, and Water Resources
Pursuant to HAR § 11-200.1-18(d)(7) – identification and analysis of impacts and alternatives considered; to ensure that offshore marine resources of East Maui remain protected, the negative effects of stormwater inundation and sediment loading surrounding the proposed project site should be evaluated.

Issues that may be examined include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, potential vulnerability of water resources, and coastal resources. Developing mitigation measures for the protection for surface water resources and the coastal ecosystem should take this into account, pursuant to HAR § 11-200.1-18(d)(8).

If you have any questions regarding this comment letter, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

Mary Alice Evans

Mary Alice Evans
Director

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Mary Alice Evans, Director
State of Hawai'i
Office of Planning and Sustainable Development
P.O. Box 2359
Honolulu, Hawai'i 96804

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i (DTS 20217161444HE)

Dear Ms. Evans:

Thank for your letter dated July 26, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to your comments.

***Hawai'i Coastal Zone Management (CZM) Program***

1. ***Comment***: *The CZM area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (Hawai'i Revised Statutes (HRS) § 205A-1). Therefore by this definition, the project site is within the CZM area for the State of Hawai'i.*

   *Pursuant to HRS § 205A-4, in implementing the objectives of the CZM program, agencies shall consider ecological, cultural, historic, esthetic, recreational, scenic, open space values, coastal hazards, and economic development. As this project is being proposed by a government agency, the Draft EA should ensure the proposed actions are consistent with the objectives and supporting policies of the Hawaii CZM Program, HRS § 205A-2, as amended. Compliance with HRS § 205A-2 is an important component for satisfying the requirements of HRS Chapter 343.*

**Response:** The Draft Environmental Assessment (EA) will evaluate how the proposed actions are consistent with the objectives and supporting policies of the Hawai‘i Coastal Zone Management (CZM) Program, Hawai‘i Revised Statues (HRS) §205A-2, as amended.

***Special Management Area (SMA)***

2. ***Comment***: *Given that the subject Environmental Assessment (EA) may serve as a supporting document for the SMA Use Permit application, we recommend that the EA specifically discuss the compliance with the requirements of SMA use and shoreline setbacks by consulting with the County of Maui Planning Department. We note that public shoreline hardening structures, including seawalls and revetments, shall be minimized at sites with beaches pursuant to HRS § 205A-2(c)(9)(C), as amended, enacted by Act 16, Session Laws of Hawaii 2020.*

   *Furthermore, the Draft EA should provide a regional location map and include the project site's proximity and relation to the designated SMA boundary.*

   **Response:** The DEM has consulted with the County of Maui, Department of Planning on compliance with the requirements of the Special Management Area (SMA) Use Permit and Shoreline Setback Variance applications.

   The Draft EA will provide a regional location map and include the project site's proximity and relation to the designated SMA boundary.

***Shoreline Setback***

3. ***Comment***: *According to the subject pre-consultation request, some of the improvements along Keawa Place will occur within the shoreline setback area. The Draft EA should consult with the County of Maui Planning Department for determination of the shoreline area as defined in HRS § 205A-41. The Draft EA should include any options to the proposed action to avoid siting structure within the shoreline area. A shoreline setback variance may be granted if the county authority finds in writing, based on the record presented, that the proposed structure is necessary for or ancillary to facilities or improvements by public agencies or public utilities regulated under HRS Chapter 269.*

**Response:** As previously mentioned, the DEM consulted with the County of Maui, Department of Planning on compliance with the requirements of shoreline setbacks. As the proposed improvements will need to occur within the Keawa Place right-of-way, the DEM will be applying for a shoreline setback variance.

***Climate Change/Sea Level Rise (SLR)***

4. ***Comment***: *SLR increases the risk of flooding, storm surges, and coastal erosion. This project involves a septic system and wastewater that is potentially harmful to the nearshore waters of Hāna Bay. Therefore, it is imperative that the Draft EA assess the vulnerability of the septic system, and its associated infrastructure, to SLR related threats common to coastal regions such as coastal inundation, storm surges, or shoreline erosion. We suggest the Draft EA refer to the findings of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report 2017, accepted by the Hawai'i Climate Change Mitigation and Adaptation Commission.*

*The Report, and Hawai'i Sea Level Rise Viewer at https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ particularly identifies a 3.2-foot sea level rise exposure area across the main Hawaiian Islands, including the island of Maui, which may occur in the mid to latter half of the 21st century. The Draft EA should provide a map of 3.2-foot sea level rise exposure area in relation to the project area, and consider site specific mitigation measures if necessary, to respond to the potential impacts of 3.2-foot sea level rise on the proposed development.*

*We acknowledge that proposed project does relocate structures further inland, thereby reducing the risks from sea level rise. A portion of proposed activity describes the conversion of one existing non-functioning ATU to a wastewater pump station. We suggest that the Draft EA includes a discussion relating to the risks of this proposed activity from SLR and saltwater intrusion that may pollute to ocean waters due to the proximity to the shoreline and consider site-specific mitigation measures to mitigate such impacts.*

**Response:** The Draft EA will assess the vulnerability of the septic system and its associated infrastructure with respect to sea level rise related threats. It is noted that the entire project is located outside of the 3.2-foot sea level rise exposure area as determined by the Hawai'i Sea Level Rise Vulnerability and Adaptation Report 2017. Nonetheless, the project will consider site-specific mitigation measures to mitigate any potential shoreline and saltwater intrusion

impacts.

***Stormwater Runoff, Erosion, and Water Resources***

5. ***Comment***: *Pursuant to HAR § 11-200.1-18(d)(7) – identification and analysis of impacts and alternatives considered; to ensure that offshore marine resources of East Maui remain protected, the negative effects of stormwater inundation and sediment loading surrounding the proposed project site should be evaluated.*

   *Issues that may be examined include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, potential vulnerability of water resources, and coastal resources. Developing mitigation measures for the protection for surface water resources and the coastal ecosystem should take this into account, pursuant to HAR § 11-200.1-18(d)(8).*

   ***Response:*** The Draft EA will include the identification and analysis of impacts and alternatives considered to the proposed action. Further, the Draft EA will address the protection of offshore marine resources, the negative effects of stormwater inundation and sediment loading. Flood and erosion prone areas, the potential vulnerability of water resources, and coastal resources will also be evaluated. The project will implement Best Management Practices (BMPs) and develop mitigation measures to protect surface water resources and the coastal ecosystem.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\OP.res.docx

MICHAEL P. VICTORINO
Mayor

ERIC A. NAKAGAWA, P.E.
Director

SHAYNE R. AGAWA, P.E.
Deputy Director

Solid Waste Division

SCOTT R. ROLLINS, P.E.
Wastewater Reclamation Division

TAMARA L. FARNSWORTH
Environmental Protection &
Sustainability Division

**COUNTY OF MAUI**
**DEPARTMENT OF**
**ENVIRONMENTAL MANAGEMENT**
2145 KAOHU STREET, SUITE 102
WAILUKU, MAUI, HAWAII 96793

August 12, 2021

Transmitted Via Email

Mr. Kauanoe Batantang, Senior Associate
Munekiyo Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawai'i 93793

SUBJECT: **RESPONSE TO EARLY CONSULTATION REQUEST FOR PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS; TMK NO.S (2)1-4-004:034 AND (2)1-4-004:029 (POR); HANA, MAUI, HAWAII.**

Dear Mr. Batantang,

We are in possession of your letter dated July 1, 2021 requesting the Department of Environmental Management's comments on the proposed action at Helene Hall, Hana Maui:

> *"The Applicant proposes to rehabilitate one [Aeration Treatment Unit] with a new aeration blower and to repurpose the other as a wastewater pump station. The wastewater will then be pumped uphill from Helene Hall to a new treatment system and absorption field located at the Hana Ball Park. The wastewater from Helene Hall will be connected to the treatment system and absorption field at a portion of the Hana Ball Park parking lot via an underground force main that runs approximately 1,500 feet along Keawa Place, which is owned by the State of Hawai'i (State), and Uakea Road, which is owned by the County. The proposed work to be done along Keawa Place and Uakea Road will take place within existing ROWs."*

We are pleased to respond that we do not have objections to the proposed action. If you have any questions or concerns, please contact the project manager, Mr. Juan A. Rivera, P.E., at 808-270-7268.

Sincerely,

Digitally signed by Shayne R. Agawa
DN: cn=Shayne R. Agawa, o=Deputy Director, ou=Department of Environmental Management, email=shayne.agawa@co.maui.hi.us, c=US
Date: 2021.08.17 10:41:53 -10'00'

for ERIC A. NAKAGAWA, P.E.
Director of Environmental Management

cc: Sean Klein, Kennedy Jenks

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Eric Nakagawa, Director
County of Maui
Department of Environmental Management
200 South High Street
Wailuku, Hawai‘i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Mr. Nakagawa:

Thank for your letter dated August 12, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we acknowledge that you do not have objections regarding the Helene Hall Septic System Improvements Project in Hāna, Maui, Hawai‘i.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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JUL 13 2021

**MICHAEL P. VICTORINO**
Mayor

**LORI TSUHAKO**
Director

**LINDA R. MUNSELL**
Deputy Director

**DEPARTMENT OF HOUSING**
**& HUMAN CONCERNS**
COUNTY OF MAUI
2200 MAIN STREET, SUITE 546
WAILUKU, MAUI, HAWAI'I 96793
PHONE: (808) 270-7805

July 8, 2021

Mr. Kauanoe Batangan, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Batangan:

**SUBJECT: EARLY CONSULTATION REQUEST FOR THE PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS; TMK NOS. (2)1-4-004:034 AND (2)1-4-004:029 (POR.); HANA, MAUI, HAWAII**

The Department has reviewed the information submitted for the above subject project. Based on our review, we have determined that the project is not subject to Chapter 2.96, Maui County Code. At the present time, the Department has no additional comments to offer.

Please contact Mr. Buddy Almeida, Housing Administrator, at (808)270-7351 if you have any questions.

Sincerely,

Lori Tsuhako

LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

cc: Buddy Almeida, Housing Administrator

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Lori Tsuhako, Director
County of Maui
Department of Housing and Human Concerns
2200 Main Street, Suite 546
Wailuku, Hawai‘i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Ms. Tsuhako:

Thank for your letter dated July 8, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we acknowledge that the Department of Housing and Human Concerns has determined the project is not subject to Chapter 2.96, Maui County Code, and has no additional comments to offer at this time.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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AUG - 2 2021

# POLICE DEPARTMENT

COUNTY OF MAUI

MICHAEL P. VICTORINO
MAYOR

OUR REFERENCE

YOUR REFERENCE

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

CHIEF OF POLICE

**DEAN M. RICKARD**
DEPUTY CHIEF OF POLICE

July 27, 2021

Mr. Kauanoe Batangan
Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Batangan:

SUBJECT: Early Consultation Request for the Proposed Helene Hall Septic System Improvements; TMK No. (2) 1-4-034 and (2) 1-4-004:029 (por.); Hana, Maui, Hawaii

We have received your letter of July 1, 2021 requesting comments on the above mentioned project. The information was assigned to Officer Ian Custer for comments. Enclosed is a copy of his findings that we would like to document as our comments. Thank you for giving us an opportunity to provide our comments.

Very truly yours,

AC

Assistant Chief John Jakubczak
for: Dean M. Rickard
Acting Chief of Police

Enclosure

c: Michele Chouteau McLean, Dept. of Planning
Juan Rivera, Dept. of Environmental Management

| | | |
|---|---|---|
| **TO** | : | **DEAN RICKARD, DEPUTY CHIEF, MAUI POLICE DEPARTMENT** |
| **VIA** | : | **CHANNELS** |
| **FROM** | : | **IAN CUSTER, POLICE OFFICER III, HANA PATROL** |
| **SUBJECT** | : | **RESPONSE TO A REQUEST FOR EARLY CONSULTATION FOR PROPOSED HELENE HALL SEPTIC TANK IMPROVEMENTS** |

John Jakubczak
Assistant Chief

NOTED. RESPONSE LETTER TO BE DRAFTED AND SUBMITTED ON DEPT. LETTERHEAD TO MUNEKIYO HIRAGA INC.
7/26/202

Sir, this communication is submitted as a response to a request for comments and recommendations by Kauanoe Batangan of Munekyo Hiraga Inc for their proposal with the Engineering Division of the County of Maui, Department of Public Works in regards to the following project;

| | |
|---|---|
| **PROJECT** | : Helene Hall Septic System Improvements |
| **APPLICANT** | : Department of Environmental Management |
| **PROJECT ADDRESS** | : Keawa Place / Uakea Road, Hana, HI, 96713 |
| **PROJECT DESCRIPTION** | : Upgrade the Wastewater Reclamation system, relocating to Hana Ball Park parking lot. Project will also involve wastewater improvements along Keawa Place and Uakea Road. |

**RESPONSE:**

In review of the provided documents, it appears that the County of Maui, Department of Environmental Management is proposing to upgrade the wastewater reclamation system at Helene Hall in Hana, Maui, and relocate it by the Hana Ball Park parking lot. To connect Helene Hall to its new wastewater system at the nearby parking lot, the project will also involve wastewater improvements along Keawa Place and Uakea Road.

Applicant proposes to rehabilitate an existing Aerobic Treatment Units (ATU) with a new aeration blower and to convert the other as a wastewater pump station. Wastewater from Helene Hall will be pumped through an underground force main that runs 1,500 feet along Keawa Place (State) and Uakea Road (County). The proposed work to be done along Keawa Place and Uakea Road will take place within existing Right-of-ways (ROWs).

Keawa Place (entrance to Hana Bay) is a four-way intersection and accommodates two-way traffic into and out of the Hana Bay area. Uakea Road is a two lane roadway that accommodates two-way traffic.

**CONCLUSION:**

There are no objections to the progression of the project. If the proposal is approved, I suggest the following concerns be addressed by Munekiyo Hiraga Inc.

1. Before the project begins, inform all agencies that will be affected of the start and completion date.

2. Recommend signage (message boards) in the construction area informing local traffic and tourist traffic of delays and times.

3. Suggest that dates/times/durations of complete closures of the roadways be provided to First Responders and the public.

4. Advanced notification regarding any closures provided to those who may be affected in coordination with the appropriate agencies.

5. Suggest flagmen be assigned if they plan to conduct alternating traffic during closures.

If any other concerns are to arise during or after the start of the project, they can be addressed at that time.

Respectfully Submitted,

15308

Ian CUSTER, E#15308
Hana Patrol Division
July 19, 2021 @ 1400 hours

HANA OFFICERS WILL MONITOR THE PROJECT DURING CONSTRUCTION AND ADDRESS ANY ISSUES THAT MAY ARISE.

LT. 10282
7/21/2021

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

John Pelletier, Chief of Police
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawai'i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i

Dear Chief Pelletier:

Thank for your letter dated July 27, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to the comments in your letter.

1. ***Comment:*** *Before the project begins, inform all agencies that will be affected of the start and completion date.*

   **Response:** Agencies that will be affected by construction of the project will be informed by the DEM of the project start and anticipated completion date.

2. ***Comment:*** *Recommend signage (message boards) in the construction area informing local traffic and tourist traffic of delays and times.*

   **Response:** A traffic control plan has been developed for the proposed project. The traffic control plan utilizes signs in the construction area informing traffic of upcoming roadwork.

3. ***Comment:*** *Suggest that dates/times/durations of complete closures of the roadways be provided to First Responders and the public.*

   **Response:** The DEM does not anticipate closure of any roadways during construction. If the complete closure of Keawa Place or Uakea Road is required, advanced notice will be given to First Responders and the public.

**4.** ***Comment:*** *Advanced notification regarding any closures provided to those who may be affected in coordination with the appropriate agencies.*

**Response:** As noted above, while roadway closures are not anticipated, should unforeseen construction conditions require such closures, notification will be provided to the public and affected agencies at the earliest practicable time.

**5.** ***Comment:*** *Suggest flagmen be assigned if they plan to conduct alternating traffic during closures.*

**Response:** The Traffic Control Plan includes the use of Flagmen, equipped with proper safety clothing and equipment to conduct, control, and manage the traffic entering the work site.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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MICHAEL P. VICTORINO
Mayor

MICHELE CHOUTEAU MCLEAN, AICP
Director

JORDAN E. HART
Deputy Director

JUL 27 2021

**DEPARTMENT OF PLANNING**
COUNTY OF MAUI
ONE MAIN PLAZA
2200 MAIN STREET, SUITE 315
WAILUKU, MAUI, HAWAII 96793

July 22, 2021

Mr. Kauanoe Batangan, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Batangan:

**SUBJECT: EARLY CONSULTATION COMMENTS FOR THE DEVELOPMENT OF PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS (RFC 2021/0127)**

| | |
|---|---|
| Project: | HELENE HALL SEPTIC SYSTEM IMPROVEMENTS |
| Location: | Hana, Maui, Hawaii |
| Description: | Proposed Septic Tank Improvements |
| TMK Nos: | (2)1-4-002:034, (2)1-4-004:029 (POR.), (2)1-4-004:999 |

The Department of Planning (Department) is in receipt of your July 1, 2021 letter requesting early consultation for the proposed Helene Hall Septic System Improvements. The proposed project is to connect Helene Hall to its new wastewater system by the Hana Ball Park parking lot. As your letter detailed, this proposed project will also include upgrading the wastewater reclamation system and involve wastewater improvements along Keawa Place and Uakea Road right-of-ways (ROWs) (TMK (2)1-4-004:999).

Specifically, this proposal seeks to improve wastewater treatment systems inclusive of two onsite aerobic treatment units (ATU) and two effluent disposal cesspools that are not currently functioning as designed and do not have the capacity to discharge the normal daily flows. Due to treatment and disposal deficiencies, the County of Maui, Department of Environmental Management (Applicant) is proposing to upgrade the existing treatment system and find alternative disposal options. As detailed in your letter, this includes rehabilitating one ATU with a new aeration blower and to repurpose the other as a wastewater pump station. The repurposed ATU will pump wastewater uphill from Helene Hall to the treatment system and absorption field at a portion of the Hana Ball Park parking lot. This will require installation of an underground force main running approximately 1,500 feet within the rights-of-way along Keawa Place, which is owned by the State of Hawaii, and Uakea Road, which is owned by the County of Maui (County).

As you have noted, the project area is located within the County's Special Management Area (SMA) and some of the improvements along Keawa Place are proposed to occur within the Shoreline Area. As such, a SMA Use Permit and Shoreline Setback Variance (SSV) will be required for this project. The Department agrees that due to applicable laws and regulations, an Environmental Assessment (EA) that conforms to Chapter 343, Hawaii Revised Statutes (HRS) and Section 11.200.1-8, Hawaii Administrative Rules (HAR) will be required. The Department appreciates this opportunity to support early consultation and provide comments as you develop this EA and advance findings relative to the significance of this project.

The Department provides the following comments for consideration in the development of the Draft EA or Environmental Impact Statement (EIS) should it be determined to be necessary. In addition to ensuring required application components detailed in the Maui Planning Commission's SMA and Shoreline Rules are addressed, please also consider including analysis of the following elements in your assessment narrative and supporting documentation:

1. Detail how the proposed project will be consistent with SMA Guidelines (HRS 205A-26) in particular as they aim to adequately control, manage, and minimize impacts from pollution and runoff, maintain adequate and properly located public recreation areas such as the Hana Ball Park, and ensure adequate public access to publicly-owned beaches, recreational areas, wildlife, and natural resources. Early coordination and documentation of correspondence with potentially impacted agencies, as well as community members and groups, that may wish to provide feedback on efforts to reduce temporary impacts to traffic and recreational areas is encouraged.

2. Describe how the project will be consistent with the Countywide Policy Plan, Maui Island Plan and the Hana 1994 Community Plan. Given the environmental sensitivity of the area, and noting the 1994 Hana Community Plan envisions comprehensive wastewater management planning which includes reduction, recycling, and reuse of wastewater as major plan components and incorporation of re-use of gray water in the County's wastewater management strategy (see Objectives 10 and 11), it is further suggested that your EA discuss what long-term infrastructure development and retrofit plans are in place, including details regarding streetscape compliance and what landscape planting components are proposed for revegetation of disturbed right-of-ways in your supporting planting plan, and what alternatives were considered and assessed to achieve these goals.

3. Indicate how the project will potentially impact – positively or negatively – nearby coastal waters which the State Department of Health has designated as Class "AA" high quality marine resources in the area. Please also consider early coordination with the State Department of Health to discuss Best Management Practices (BMPs) for water quality protection including possibilities for use of green infrastructure or gray water recycling to reduce system loads and accommodate future use in the area. Please document compliance with all regulatory requirements, which may benefit from early confirmation of whether discharge monitoring has or will be conducted to ensure compliance with applicable water quality protection requirements and outline BMPs that were considered and selected, if any, for proposed system upgrades.

4. Detail how the development will comply with requirements and guidelines of Chapter 19.62, Maui County Code, relating to flood hazard areas and Chapter 20.08, Maui County Code, relating to soil erosion and sedimentation control, and Chapter 6E, HRS, relating to historic preservation.

5. Include a completed Zoning and Flood Confirmation Form to support further analysis. Based on the map provided it appears that portions of the proposed activity are within the "Zone VE" Flood Hazard Area, which is defined as a coastal high hazard area. Please coordinate with the Department's Zoning Administration and Enforcement Division (ZAED), to confirm whether the project area is within a regulated flood zone and if so, include discussion of flood hazard area and design considerations to minimize impacts of flooding to the wastewater system improvements, and work with ZAED to address requirements of a Special Flood Hazard Area Development Permit.

6. Given the historic importance of Helene Hall and the potential for sensitive cultural resources in the project area, please identify the depth of the proposed excavation for the project and coordinate with the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) to document coordination to ensure any proposed earthmoving activities will avoid, minimize, and mitigate potentially significant impacts to resources of concern.

7. Identify the project implementation timeline as well as proposed work hours and project phasing that has been considered to avoid and minimize

traffic impacts and discuss proposed traffic impact mitigation developed in coordination with the Hawaii Department of Transportation, Department of Public Works and potentially impacted stakeholders in the Hana area.

8. Indicate proposed staging areas, including TMKs and letters of permission for use from land owners should they be off-site, and discussion of estimated duration of the proposed project as it relates to staging at those sites.

9. In discussion of direct, indirect, and cumulative impacts, proactive alignment with current and future community wastewater management needs and consideration of best practices in risk mitigation planning such as back-up power for the proposed new wastewater pump station, is encouraged to reduce risk of system failure that may result in public health concerns should there be a significant power disruption.

10. Please confirm the estimated cost of this project.

11. A robust community engagement process is encouraged to receive input on the proposed action, including coordinated efforts to ease impacts to traffic and parking as well as public beach and recreational area access during the implementation phase.

Thank you for the opportunity to comment on this project proposal. Should you have any questions about the comments in this letter, please contact Staff Planner Erin Derrington at erin.derrington@mauicounty.gov or at (808) 270-5537.

Sincerely,

MICHELE MCLEAN, AICP
Planning Director

xc: Jordan E. Hart, Deputy Director
Clayton I. Yoshida, Planning Program Administrator (PDF)
Jeffrey P. Dack, Current Planning Supervisor (PDF)
Erin M. Derrington, Staff Planner (PDF)
Rowena Dagdag-Andaya, Director, Department of Public Works (PDF)
Project File

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Michele McLean, Director
County of Maui
Department of Planning
**Attention: Erin Derrington**
2200 Main Street, Suite 315
Wailuku, Hawai'i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i

Dear Ms. McLean:

Thank for your letter dated July 22, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to your comments.

1. ***Comment:*** *Detail how the proposed project will be consistent with SMA Guidelines (HRS 205A-26) in particular as they aim to adequately control, manage, and minimize impacts from pollution and runoff, maintain adequate and properly located public recreation areas such as the Hana Ball Park, and ensure adequate public access to publicly-owned beaches, recreational areas, wildlife, and natural resources. Early coordination and documentation of correspondence with potentially impacted agencies, as well as community members and groups, that may wish to provide feedback on efforts to reduce temporary impacts to traffic and recreational areas is encouraged.*

   **Response:** The Draft EA will detail how the proposed project is consistent with SMA Guidelines (HRS 205A-26).

   To control runoff, sedimentation, and erosion, a program of Best Management Practices (BMPs) will be implemented in accordance with applicable provisions of the Maui County Code and Drainage Rules of the Department of Public Works. This includes the use of filter socks, trenches around the perimeter of work areas, and sediment filters for drainage inlets.

Construction activities, including staging, will occur within the project boundaries detailed in the early consultation letter. For work along Keawa Place and Uakea Road, a Traffic Control Plan will be implemented to allow the public to continue accessing and utilizing public recreation areas.

Coordination with relevant County agencies and community stakeholders has been conducted via the early consultation process and through town halls conducted by Councilmember Sinenci. Further, the public will have more opportunities to express their comments on the project through the public comment period during the Draft EA process as well as during the Special Management Area Use Permit application approval process. The comments received during the public comment period and response letters will be included in the Environmental Assessment (EA).

**2.** ***Comment:*** *Describe how the project will be consistent with the Countywide Policy Plan, Maui Island Plan and the Hana 1994 Community Plan. Given the environmental sensitivity of the area, and noting the 1994 Hana Community Plan envisions comprehensive wastewater management planning which includes reduction, recycling, and reuse of wastewater as major plan components and incorporation of re-use of gray water in the County's wastewater management strategy (see Objectives 10 and 11), it is further suggested that your EA discuss what long-term infrastructure development and retrofit plans are in place, components are proposed for revegetation of disturbed right-of-ways in your supporting planting plan, and what alternatives were considered and assessed to achieve these goals.*

**Response:** The Draft EA will detail and analyze how the proposed project is consistent with the Countywide Policy Plan, Maui Island Plan, and the Hana Community Plan (1994). A section specific to the Hana Community Plan (1994) will be incorporated to include discussion of the comprehensive and long term wastewater management strategy for the Hāna community.

The proposed Helene Hall Septic System Improvements Project is directly applicable to the goals of the various plans as it relates to the improvement of parks and public facilities, physical infrastructure, and good governance. While the improvements will not provide for the reduction, recycling, and reuse of wastewater, the proposed action will allow the community to enjoy the Helene Hall Community Center as it will have a functioning kitchen and restrooms. As a wastewater improvements initiative, this project will also directly

improve the County's physical infrastructure to serve the needs of the people.

**3.** ***Comment:*** *Indicate how the project will potentially impact - positively or negatively - nearby coastal waters which the State Department of Health has designated as Class "AA" high quality marine resources in the area. Please also consider early coordination with the State Department of Health to discuss Best Management Practices (BMPs) for water quality protection including possibilities for use of green infrastructure or gray water recycling to reduce system loads and accommodate future use in the area. Please document compliance with all regulatory requirements, which may benefit from early confirmation of whether discharge monitoring has or will be conducted to ensure compliance with applicable water quality protection requirements and outline BMPs that were considered and selected, if any, for proposed system upgrades.*

**Response:** As previously mentioned, a program of Best Management Practices (BMPs) will be implemented during construction to prevent or mitigate runoff that will potentially impact nearby coastal waters. Furthermore, the General Contractor for the project will comply with all applicable provisions of the Hawai'i Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control." Any discharges associated with the project construction will comply with State water quality standards (Hawai'i Administrative Rules, Chapter 11-54).

Prior to construction, the General Contractor will be required to have a site specific spill prevention plan (SSSPP) approved by the County of Maui, Department of Environmental Management, Wastewater Reclamation Division. Post-construction, the proposed improvements will prevent wastewater from leaking out of the facility and percolating downstream to Hāna Bay.

**4.** ***Comment:*** *Detail how the development will comply with requirements and guidelines of Chapter 19.62, Maui County Code, relating to flood hazard areas and Chapter 20.08, Maui County Code, relating to soil erosion and sedimentation control, and Chapter 6E, HRS, relating to historic preservation.*

**Response:** The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) indicates that the project site is located within Flood Zone X and VE. Helene Hall and the Hāna Ball Park parking lot, where most of the construction and rehabilitation will take place, are located in Flood Zone X. The only improvements located in Flood Zone VE are along the Keawa Place right-of-way. A Special Flood Hazard Area Development Permit will be obtained prior to construction of the improvements along Keawa Place.

As mentioned earlier, a program of BMPs will be utilized to control runoff, sedimentation, and erosion from construction activities. The project will comply with all necessary permits, pursuant the requirements and guidelines of Chapter 19.62 and Chapter 20.08, Maui County Code.

The Department of Environmental Management has initiated Chapter 6E consultation with the Department of Land and Natural Resources, State Historic Preservation Division (SHPD). Through coordination with the Maui County Archaeologist, the DEM has submitted an Archaeological Literature Review and Field Inspection to support a request for preparation of an Archaeological Monitoring Plan. This request is under review with the SHPD.

**5.** ***Comment:*** *Include a completed Zoning and Flood Confirmation Form to support further analysis. Based on the map provided it appears that portions of the proposed activity are within the "Zone VE" Flood Hazard Area, which is defined as a coastal high hazard area. Please coordinate with the Department's Zoning Administration and Enforcement Division (ZAED), to confirm whether the project area is within a regulated flood zone and if so, include discussion of flood hazard area and design considerations to minimize impacts of flooding to the wastewater system improvements, and work with ZAED to address requirements of a Special Flood Hazard Area Development Permit.*

**Response:** A completed Zoning and Flood Confirmation form for each affected Tax Map Key (TMK) will be provided along with the Draft EA. The applicant will consult with the Department of Planning, Zoning Administration and Enforcement Division to confirm whether the project area is within a regulated flood zone. If required, a Special Flood Hazard Area Development Permit will be obtained.

6. ***Comment:*** *Given the historic importance of Helene Hall and the potential for sensitive cultural resources in the project area, please identify the depth of the proposed excavation for the project and coordinate with the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) to document coordination to ensure any proposed earthmoving activities will avoid, minimize, and mitigate potentially significant impacts to resources of concern.*

   **Response:** The maximum expected depth of the proposed excavation is 9.5 feet. As previously noted, Chapter 6E consultation has been initiated with the SHPD to ensure any earthmoving activities will avoid, minimize, and mitigate potentially significant impacts to resources of concern.

7. ***Comment:*** *Identify the project implementation timeline as well as proposed work hours and project phasing that has been considered to avoid and minimize traffic impacts and discuss proposed traffic impact mitigation developed in coordination with the Hawaii Department of Transportation, Department of Public Works and potentially impacted stakeholders in the Hana area.*

   **Response:** Upon completion of environmental and permitting applications, construction of the project is expected to take approximately 12 months. Work is expected to occur during the daytime on weekdays. No night work or holiday work is anticipated. The State of Hawaiʻi, Department of Transportation; County of Maui, Department of Public Works; and members of the Hāna community have been consulted on the proposed project. Further, a Use and Occupancy Permit, obtained from the State of Hawaiʻi Department of Transportation will be obtained prior to any work done within the State-owned Keawa Place right-of-way. A Traffic Control Plan has been created to minimize traffic impacts during construction.

8. ***Comment:*** *Indicate proposed staging areas, including TMKs and letters of permission for use from land owners should they be off-site, and discussion of estimated duration of the proposed project as it relates to staging at those sites.*

   **Response:** As previously mentioned, all construction staging will occur within the limits of the project area. The affected TMKs are (2)1-4-004:034, (2)1-4-004:999, and (2) 1-4-004:029. Letters of Authorization for the affected TMKs will be included in the Special Management Area Use Permit application document.

**9.** ***Comment:*** *In discussion of direct, indirect, and cumulative impacts, proactive alignment with current and future community wastewater management needs and consideration of best practices in risk mitigation planning such as back-up power for the proposed new wastewater pump station, is encouraged to reduce risk of system failure that may result in public health concerns should there be a significant power disruption.*

**Response:** The Draft EA will discuss proactive alignment with current and future community wastewater management needs.

At this time, the DEM is not proposing a back-up power supply system for the new wastewater pump station. Instead, the plans call for alarms to notify County staff of pump failures during outages so that the bathrooms may be locked until the system is pumped out and power can be restored.

**10.** ***Comment:*** *Please confirm the estimated cost of this project.*

**Response:** The estimated cost of the project is $1.33 million.

**11.** ***Comment:*** *A robust community engagement process is encouraged to receive input on the proposed action, including coordinated efforts to ease impacts to traffic and parking as well as public beach and recreational area access during the implementation phase.*

**Response:** As previously mentioned, consultation with affected agencies and members of the public has been initiated through the early consultation process. Additional outreach has been done as part of the Cultural Impact Assessment, which involved consultation with people who have lineal and cultural ties to the Hāna area.

Juan Rivera, a Capital Improvements Manager with the DEM, has participated in town halls hosted by Councilmember Sinenci on March 20, 2021, and July 7, 2021. He will continue to update the Hāna community at future town hall meetings, with the next one scheduled for October 7, 2021. A 30-day public comment period will follow the publication of the Draft EA in the Environmental Notice. Additionally, the Hāna Advisory Committee will consider the applications for a Special Management Area Permit and Shoreline Setback Variance. The public will be afforded the opportunity to learn about the project and provide comments during those periods.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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MICHAEL P. VICTORINO
Mayor

ROWENA M. DAGDAG-ANDAYA
Director

JORDAN MOLINA
Deputy Director

WADE SHIMABUKURO, P.E.
Development Services Administration

RODRIGO "CHICO" RABARA, P.E.
Engineering Division

JOHN R. SMITH, P.E.
Highways Division

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
**DEPARTMENT OF PUBLIC WORKS**
200 SOUTH HIGH STREET, ROOM 434
WAILUKU, MAUI, HAWAII 96793

January 25, 2022

Mr. Kauanoe Batangan
MUNEKIYO HIRAGA
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

Dear Mr. Batangan:

**SUBJECT: EARLY CONSULTATION REQUEST FOR THE PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS**
**TMK: (2) 1-4-004:034, POR. 029**

We reviewed the subject application and have the following comments:

Comments from the Engineering Division:

1. Drainage improvements shall comply with the following:

   - Title MC-15, Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui";
   - Title MC-15, Chapter 111, "Rules for the Design of Storm Water Treatment Best Management Practices"; and
   - Title 20, Chapter 20.08, "Soil Erosion and Sedimentation Control".

Please call Jordan Molina at (808) 270-7845 if you have any questions regarding this letter.

Sincerely,

ROWENA M. DAGDAG-ANDAYA
Director of Public Works

RMDA:JM:da
xc: Highways Division
Engineering Division
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VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Jordan Molina, Director
County of Maui
Department of Public Works
200 South High Street, Room 434
Wailuku, Hawai'i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i

Dear Mr. Molina:

Thank for your letter dated January 25, 2022, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to the comments in your letter.

***Comment No. 1***

*Drainage improvements shall comply with the following:*

- *Title MC-15, Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui";*
- *Title MC-15, Chapter 111, "Rules for the Design of Storm Water Treatment Best Management Practices"; and*
- *Title 20, Chapter 20.08, "Soil Erosion and Sedimentation Control"*

**Response:** We confirm that the proposed project will comply with the aforementioned rules and standards.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808)983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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JUL 13 2021

MICHAEL P. VICTORINO
Mayor

MARC I. TAKAMORI
Director

MICHAEL B. DU PONT
Deputy Director

**DEPARTMENT OF TRANSPORTATION**
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793
TELEPHONE: (808) 270-7511
FAX: (808) 270-7505

July 7, 2021

Munekiyo Hiraga
Attention: Kauanoe Batangan
305 High Street, Suite 104
Wailuku, HI 96793

Subject: Early Consultation Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hana, Maui, Hawaii

Dear Mr. Batangan,

Thank you for the opportunity to comment on this project. We have no comments to make regarding this project at this time.

Please feel free to contact me if you have any questions.

Sincerely,

Marc Takamori
Director

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Karlynn K. Fukuda
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Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Marc Takamori, Director
County of Maui
Department of Transportation
200 South High Street
Wailuku, Hawai‘i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Mr. Takamori:

Thank for your letter dated July 7, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we acknowledge that the County of Maui, Department of Transportation does not have any comments regarding the Helene Hall Septic System Improvements Project in Hāna, Maui, Hawai‘i.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\CountyDOT.res.docx

**MICHAEL P. VICTORINO**
Mayor

**JEFFREY T. PEARSON, P.E.**
Director

**HELENE KAU**
Deputy Director

**DEPARTMENT OF WATER SUPPLY**
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAIʻI 96793
www.mauicounty.gov/water

July 22, 2021

Kauanoe Bantagan
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaiʻi

Dear Kauanoe Bantagan:

Re: Helene Hall Septic System Improvements Early Consultation Request
TMK: (2)1-4-004:034 and (2)1-4-004:029 (por.)
Hāna, Maui, Hawaiʻi

Thank you for the opportunity for the County of Maui Department of Water Supply's (MDWS) Water Resources and Planning Division to comment on the Helene Hall Septic System Improvements Early Consultation Request. The MDWS Hāna System services the Hāna Town area within which the proposed project is located. In order to address potential MDWS infrastructure impacts, please coordinate wastewater treatment system infrastructure installation with our Engineering Division at 808-270-7835.

**Sea Level Rise (SLR) Potable and Wastewater Cross-Contamination Concerns**
SLR and the associated coastal impacts have the potential to harm an array of infrastructure, including water supply and wastewater systems (Maui Island Water Use and Development Plan, 2019, page 46). SLR data indicates that there is an MDWS water line approximately 400 feet away from Helene Hall that will likely succumb to 3.2-ft of SLR in 30-70 years. We are concerned that planned wastewater lines will be in the vicinity of the MDWS waterline and within 3.2-ft of SLR near Helene Hall in Hāna Bay, and that both lines may eventually be submerged and susceptible to corrosion, resulting in MDWS potable water and wastewater cross-contamination. In order to avoid the potential to contaminate MDWS potable water pipes, please consider that new planned wastewater pipes should be either: 1) placed mauka of the 3.2-ft SLR-XA (3.2-ft of SLR plus passive flooding, annual high wave flooding, and erosion factored-in); 2) extra-reinforced to resist corrosion; or 3) elevated above ground.

**Septic System Best Management Practices (BMPs)**
The MDWS recommends that the applicant utilize the following BMPs for septic systems:

1. Have the septic system inspected annually and pumped out regularly.

2. No chemical or other additive can be a substitute for regular pumping. Septic System chemicals can prevent the septic system from functioning properly.
3. Be cautious about what is put into the system. Substances like cigarette butts and sanitary items, or fats do not break down easily in septic systems. Prevent strong chemicals like paints, solvents, oil, and pesticides from entering the system and entering the groundwater. Educational signage for the public users may be appropriate.
4. Practice water conservation to increase system life span. Limit the amount of water entering the system by using water-saving fixtures and appliances.
5. Keep roof drains and storm water runoff away from the drain field area.
6. Keep leaching area free of vehicles, buildings, trees and shrubs.
7. Keep accurate records of on-site maintenance activities.
8. Keep an accurate map of the location of all system components.

**Construction BMPs for Pollution Prevention**

In order to protect ground and surface water resources, we recommend that in addition to any required BMPs, the following measures designed to minimize infiltration and runoff be implemented during construction:

1. Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the ground.
2. Properly and promptly dispose of all loosened and excavated soil and debris material from drainage structure work.
3. Maintain vehicles and equipment to prevent oil or other fluids from leaking. Concrete trucks and tools used for construction should be rinsed off-site.
4. Properly install and maintain erosion control barriers such as silt fencing or straw bales.
5. Disturb the smallest area possible.
6. Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid establishment of stands of plants. In order to minimize chemical run-off, apply biocides only during dry periods of low rainfall.
7. Keep run-off on site.

We hope you find this information useful. Should you have any questions, please contact staff planner Alex Buttaro at (808) 463-3103 or alex.buttaro@mauicounty.gov.

Sincerely,

Jeffrey T. Pearson, P.E.
Director
BAB

Cc: MDWS Engineering

S:\PLANNING\Permit_Review\Projects Review\planning review\EA-EIS\214004034 Helene Hall Septic System Improvements Early Consultation Request

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
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SENIOR ADVISOR

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October 17, 2022

Helene Kau, Director
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawai'i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i

Dear Ms. Kau:

Thank for your letter dated July 22, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to the comments in your letter.

1. ***Comment:*** *The MDWS Hāna System services the Hāna Town area within which the proposed project is located. In order to address potential MDWS infrastructure impacts, please coordinate wastewater treatment system infrastructure installation with our Engineering Division at 808-270-7835.*

   **Response:** The DEM will coordinate with the Department of Water Supply, Engineering Division to ensure that existing infrastructure will not be negatively impacted by the proposed activity.

2. ***Comment:*** ***Sea Level Rise (SLR) Potable and Wastewater Cross-Contamination Concerns***
   *SLR and the associated coastal impacts have the potential to harm an array of infrastructure, including water supply and wastewater systems (Maui Island Water Use and Development Plan, 2019, page 46). SLR data indicates that there is an MDWS water line approximately 400 feet away from Helene Hall that will likely succumb to 3.2-ft of SLR in 30-70 years. We are concerned that planned wastewater lines will be in the vicinity of the MDWS waterline and within 3.2-ft of SLR near Helene Hall in Hāna Bay, and that both lines may eventually be submerged and susceptible to corrosion, resulting in MDWS potable water and wastewater cross contamination. In order to avoid the potential to contaminate MDWS potable water pipes, please consider that new planned wastewater pipes should be either: 1) placed mauka of the 3.2-ft SLR-XA (3.2-ft of SLR plus passive*

*flooding, annual high wave flooding, and erosion factored-in); 2) extra-reinforced to resist corrosion; or 3) elevated above ground.*

**Response:** All proposed improvements will be located outside of the 3.2-ft. Sea Level Rise Exposure Area (SLR-XA).

***3. Comment: Septic System Best Management Practices (BMPs)***

*The MDWS recommends that the applicant utilize the following BMPs for septic systems:*

1. *Have the septic system inspected annually and pumped out regularly.*
2. *No chemical or other additive can be a substitute for regular pumping. Septic System chemicals can prevent the septic system from functioning properly.*
3. *Be cautious about what is put into the system. Substances like cigarette butts and sanitary items, or fats do not break down easily in septic systems. Prevent strong chemicals like paints, solvents, oil, and pesticides from entering the system and entering the groundwater. Educational signage for the public users may be appropriate.*
4. *Practice water conservation to increase system life span. Limit the amount of water entering the system by using water-saving fixtures and appliances.*
5. *Keep roof drains and storm water runoff away from the drain field area.*
6. *Keep leaching area free of vehicles, buildings, trees and shrubs.*
7. *Keep accurate records of on-site maintenance activities.*
8. *Keep an accurate map of the location of all system components.*

**Response:** The DEM acknowledges the noted Septic System Best Management Practices (BMPs). To the extent practicable, the BMPs will be integrated into the project design and operation.

***4.*** ***<u>Comment</u>: Construction BMPs for Pollution Prevention***

*In order to protect ground and surface water resources, we recommend that in addition to any required BMPs, the following measures designed to minimize infiltration and runoff be implemented during construction:*

1. *Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the ground.*
2. *Properly and promptly dispose of all loosened and excavated soil and debris material from drainage structure work.*
3. *Maintain vehicles and equipment to prevent oil or other fluids from leaking. Concrete trucks and tools used for construction should be rinsed off-site.*
4. *Properly install and maintain erosion control barriers such as silt fencing or straw bales.*
5. *Disturb the smallest area possible.*
6. *Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid establishment of stands of plants. In order to minimize chemical run-off, apply biocides only during dry periods of low rainfall.*
7. *Keep run-off on site.*

**<u>Response</u>:** The DEM acknowledges the noted Construction BMPs for Pollution Prevention. To the extent practicable, these BMPs will be integrated into the project construction plans.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Mukai
Associate

KLN:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\DWS_director.res.docx

**MICHAEL P. VICTORINO**
Mayor

**JEFFREY T. PEARSON, P.E.**
Director

**HELENE KAU**
Deputy Director

**DEPARTMENT OF WATER SUPPLY**
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI'I 96793

August 5, 2021

Mr. Kauanoe Batangan
MUNEKIYO HIRAGA
via email: planning@munekiyohiraga.com

Dear Mr. Batangan:

Subject: Early Consultation Request for Proposed Helene Hall Septic System Improvements
TMK: (2) 1-4-004:034, 1-4-004:029 (por.), Hana, Maui, Hawaii

Thank you for the opportuntiy to review and comment on the proposed Helene Hall Septic System Improvements project. The Department of Water Supply has water system improvements in the locations of the proposed improvements. Therefore, please submit construction plans for our review and approval.

If water service from the Department of Water Supply is required, the project must meet the criteria outlined in the Administrative Rules (Title 16, Chapter 201). This means that the amount of water requested shall not be greater than 120,000 gallons per day based on the current forecasted water availability for the Hana water system.

If you have any questions, please contact Tammy Yeh of our Engineering Division at (808) 270-7682 or at tammy.yeh@mauicounty.gov. Engineering Division's main number is (808) 270-7835.

Sincerely,

WENDY TAOMOTO, P.E.
Engineering Program Manager

TY

cc: DWS Planning Division

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

October 17, 2022

Wendy Taomoto, Engineering Program Manager
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawai'i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai'i

Dear Ms. Taomoto:

Thank for your letter dated August 5, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to the comments in your letter.

1. ***Comment:*** *The Department of Water Supply has water system improvements in the locations of the proposed improvements. Therefore, please submit construction plans for our review and approval.*

   **Response:** We acknowledge that the Department of Water Supply (DWS) has system improvements in the locations of the proposed Helene Hall Septic System Improvements. The project's contractor, once selected, will coordinate with the DWS prior to construction to ensure DWS water system improvements are not inadvertently damaged.

2. ***Comment:*** *If water service from the Department of Water Supply is required, the project must meet the criteria outlined in the Administrative Rules (Title 16, Chapter 201). This means that the amount of water requested shall not be greater than 120,000 gallons per day based on the current forecasted water availability for the Hana water system.*

   **Response:** If water service from the DWS is required, the DEM will ensure that the project complies with the criteria outlined in the Administrative Rules (Title 16, Chapter 201).

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\DWS.res.docx

**MICHAEL P. VICTORINO**
Mayor

**HERMAN ANDAYA**
Administrator

County of Maui
**MAUI EMERGENCY MANAGEMENT AGENCY**
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI'I 96793
PH: (808) 270-7285
emergency.management@mauicounty.gov

July 27, 2021

Munekiyo Hiraga
Attention: Kauanoe Batangan
305 High St, Suite 104
Wailuku, HI 96793

Mr. Kauanoe Batangan,

SUBJECT: HELENE HALL SEPTIC SYSTEM IMPROVEMENTS; TMK NOS. (2)1-4-004:034 AND (2)1-4-004:029 (POR.); HANA, MAUI, HAWAII

Thank you for your proposal and the opportunity for us to submit suggestions and comments on the proposed Helene Hall Septic System Improvements. We have read the request and have offered some comments and considerations for your convenience below.

1.) Currently Maui County Emergency Management Agency (MEMA) does not have any suggestions regarding the Helene Hall Septic System Improvements, in Hana, Maui, HI

Thank you for allowing us to make our suggestions to your project. Should you have any questions please feel free to contact Gina Albanese (808) 270-7276, or via email at Herman.Andaya@co.maui.hi.us

Sincerely,

Herman Andaya
MEMA Administrator

MUNEKIYO HIRAGA
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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy
VICE PRESIDENT
Tessa Munekiyo Ng
VICE PRESIDENT
Michael T. Munekiyo
SENIOR ADVISOR

October 17, 2022

Herman Andaya, Administrator
County of Maui
Maui Emergency Management Agency
200 South High Street
Wailuku, Hawai‘i 96793

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Mr. Andaya:

Thank for your letter dated July 27, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management, we acknowledge that the Maui County Emergency Management Agency does not have any suggestions regarding the Helene Hall Septic System Improvements Project in Hāna, Maui, Hawai‘i.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\EC\Response Letters\MEMA.res.docx

Maui: 305 High Street, Suite 104 • Wailuku, Hawaii 96793 • Tel: 808.244.2015 • Fax: 808.244.8729
Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

**Maui Economic Opportunity, Inc.**

P.O. Box 2122
Kahului, HI 96733
808-249-2990
Fax: 808-249-2991
www.meoinc.org

Sept. 27, 2021

Munekiyo Hiraga
Attention: Kauanoe Batangan
305 High St., Suite 104
Wailuku, HI 96793
Email: planning@munekiyohiraga.com

**Re: Early Consultation Request for Proposed Helene Hall Septic System Improvements**

To Whom It May Concern:

Maui Economic Opportunity operates its Hana Office at the Hana Community Center, across the street from the proposed absorption field at Hana Ball Park. MEO has operated out of that space on Uakea Road for more than 20 years.

As an aside, MEO was forced to leave the Hana Community Center for repairs and improvements on Dec. 31, 2020. We are unsure of the timetable for completion of the work, and staff currently is working from home. MEO continues to serve its clients, though the lack of an office creates difficulties and inconveiences for both staff and people we service.

MEO supports the needed project. The agency requests that work be done as quickly as possible and without impact to the time table of the community center repair/improvement project. Uakea Road is an access road to the MEO facility and the Hana Ball Park.

Thank you for allowing us to comment on this needed improvement project for the Hana community.

Sincerely,

Debbie Cabebe, SHRM-SCP
Chief Executive Officer

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Karlynn K. Fukuda
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Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT
Michael T. Munekiyo AICP
SENIOR ADVISOR

October 17, 2022

Debbie Cabebe, SHRM-SCP
Cheif Executive Officer
Maui Economic Opportunity, Inc.
P.O. Box 2122
Kahului, Hawai‘i 96733

SUBJECT: Early Consultation Letter Request for the Proposed Helene Hall Septic System Improvements; TMK Nos. (2)1-4-004:034 and (2)1-4-004:029 (por.); Hāna, Maui, Hawai‘i

Dear Ms. Cabebe:

Thank for your letter dated September 27, 2021, on the subject project. On behalf of the County of Maui, Department of Environmental Management (DEM), we provide the following responses to the comments in your letter.

1. ***Comment:*** *Maui Economic Opportunity operates its Hana Office at the Hana Community Center, across the street from the proposed absorption field at Hana Ball Park. MEO has operated out of that space on Uakea Road for more than 20 years.*

   *As an aside, MEO was forced to leave the Hana Community Center for repairs and improvements on Dec. 31, 2020. We are unsure of the timetable for completion of the work, and staff currently is working from home. MEO continues to serve its clients, though the lack of an office creates difficulties and inconveiences for both staff and people we service.*

   *MEO supports the needed project. The agency requests that work be done as quickly as possible and without impact to the time table of the community center repair/improvement project. Uakea Road is an access road to the MEO facility and the Hana Ball Park.*

   **Response:** DEM acknowledges that Maui Economic Opportunity (MEO) operates its Hāna Office at the Hāna Community Center, across the street from the proposed absorption field at Hāna Ball Park. DEM will be sensitive to the ongoing community repair/improvement project and will coordinate with MEO to minimize disruptions to it's Hāna Office operations.

Pending the approval of all necessary permits, the project is anticipated to begin construction in July 2022 and take 12 months to complete. During construction, the DEM will implement a traffic control plan to minimize traffic impacts and ensure continued use Uakea Road and Keawa Place.

We appreciate your input and will include a copy of your comment letter and this response in the Draft Environmental Assessment (EA). A copy of the Draft EA will be sent to your office for review and comment. Should you have any questions or require further information regarding the proposed action, please contact me at (808)983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
cc: Sean Klein, Kennedy Jenks
Juan Rivera, Department of Environmental Management
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# PARTIES CONSULTED DURING THE PREPARATION OF THE FINAL ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

# X

# X. PARTIES CONSULTED DURING THE PREPARATION OF THE FINAL ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The Draft Environmental Assessment (EA) for the subject action was filed and published with the Office of Planning and Sustainable Development on October 23, 2022. The following agencies were sent a copy of the Draft EA. Comments on the Draft EA were received during the 30-day public comment period. Letters received as well as responses to substantive comments are included in this Chapter.

**Federal Agencies**

1. National Marine Fisheries Service
   Pacific Islands Regional Office
   1845 Wasp Boulevard, Building 176
   Honolulu, HI 96818

2. Gerald Gregory, District Conservationist
   Natural Resources Conservation Service
   U.S. Department of Agriculture
   77 Hoʻokele Street, Suite 202
   Kahului, HI 96793

3. State Conservationist
   Natural Resources Conservation Service
   U.S. Department of Agriculture
   P.O. Box 50004
   Honolulu, HI 96850-0001

4. Linda Speerstra, Chief
   U.S. Department of the Army, Regulatory Branch
   U.S. Army Engineer District, Honolulu
   Regulatory Branch, Building 230
   Fort Shafter, HI 96858-5440
   *via email: CEPOH-RO@usace.army.mil*

5. Chelsie Javar-Salas, Island Team Leader
   U. S. Fish and Wildlife Service
   300 Ala Moana Blvd., Rm. 3-122
   Honolulu, HI 96850

**StateAgencies**

6. Lynn DeCoite, Senator
   Hawaiʻi State Senate
   Hawaiʻi State Capitol, Room 231
   415 S. Beretania Street
   Honolulu, HI 96813

7. Linda Clark
   House of Representatives
   Hawaiʻi State Capitol, Room 303
   415 S. Beretania Street
   Honolulu, HI 96813

8. Patti Kitkowski
   District Environmental Health Program Chief
   State of Hawaiʻi
   Department of Health
   Maui Sanitation Branch
   54 South High Street, Room 300
   Wailuku, HI 96793

9. Kathleen Ho, Acting Director
   State of Hawaiʻi
   Department of Health
   Office of Environmental Quality Control
   235 S. Beretania Street, Suite 702
   Honolulu, HI 96813

10. Jade Butay, Director
    State of Hawaiʻi
    Department of Transportation
    869 Punchbowl Street
    Honolulu, HI 96813

11. Dr. Sylvia Hussey, Chief Executive Officer
    State of Hawaiʻi
    Office of Hawaiian Affairs
    560 N. Nimitz Highway, Suite 200
    Honolulu, HI 96817

12. State of Hawaiʻi
    Department of Education
    Office of Planning
    3633 Waialae Avenue, Room C-209
    Honolulu, HI 96816

13. William Aila, Jr., Chair
State of Hawai‘i
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

14. Dr. Elizabeth Char, PhD, Director
State of Hawai‘i
Department of Health
1250 Punchbowl St., Room 325
Honolulu, HI 96813

15. Alec Wong, P.E., Chief
State of Hawai‘i
Department of Health
Clean Water Branch
Hale Ola, Room 225
2827 Waimano Home Road
Pearl City, HI 96782

16. State of Hawai‘i
Department of Health
Environmental Health Administration
P.O. Box 3378
Honolulu, HI 96801

17. Lene Ichinotsubo
State of Hawai‘i
Department of Health
Solid and Hazardous Waste Branch
2827 Waimano Road, Suite 100
Pearl City, HI 96782-1407

18. Mike McCartney, Director
State of Hawai‘i
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, HI 96804

19. Major General Kenneth Hara, Adjutant General
State of Hawai‘i
Department of Defense
3949 Diamond Head Road
Honolulu, HI 96816

20. Keith Hayashi, Interim Superintendent
State of Hawai‘i
Department of Education
P.O. Box 2360
Honolulu, HI 96804

21. M. Kaleo Manuel, Deputy Director
State of Hawai‘i
Commission on Water Resource Management
P. O. Box 621
Honolulu, HI 96809

22. Curt Otaguro, Comptroller
State of Hawai‘i
Department of Accounting and General Services
1151 Punchbowl Street, #426
Honolulu, HI 96813

23. Phyllis Shimabukuro-Geiser, Chair
State of Hawai‘i
Department of Agriculture
1428 South King Street
Honolulu, HI 96814-2512

24. Suzanne Case, Chairperson
State of Hawai‘i
Department of Land and Natural Resources
P. O. Box 621
Honolulu, HI 96809

25. Michael Cain, Acting Administrator
State of Hawai‘i
Department of Land and Natural Resources
Office of Conservation and Coastal Lands
1151 Punchbowl Street, Room 131
Honolulu, HI 96813

26. Mary Alice Evans, Director
State of Hawai‘i
Office of Planning and Sustainable Development
P. O. Box 2359
Honolulu, HI 96804

**County Agencies**

27. Eric Nakagawa, Director
County of Maui
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, HI 96793

28. Chief Bradford Ventura
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, HI 96732

29. Lori Tsuhako, Director
County of Maui
Department of Housing and Human Concerns
2200 Main Street, Suite 546
Wailuku, HI 96793

30. Karla Peters, Director
County of Maui
Department of Parks and Recreation
700 Halia Nakoa Street, Unit 2F
Wailuku, HI 96793

31. Chief John Pelletier
County of Maui
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793

32. Michele Chouteau McLean, Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, HI 96793

33. Jordan Molina, Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, HI 96793¶

34. Marc Takamori, Director
County of Maui
Department of Transportation
110 Ala‘ihi Street, Suite 210
Kahului, HI 96732

35. Helene Kau, Director
County of Maui
Department of Water Supply
200 South High Street, 5th Floor
Wailuku, HI 96793

36. Herman Andaya, Administrator
County of Maui
Maui Emergency Management Agency
200 South High Street
Wailuku, HI 96793

37. JoAnn Inamasu, Director
County of Maui
Office of Economic Development
2200 Main Street, Suite 305
Wailuku, HI 96793

38. Shane Sinenci, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

39. Yuki Lei Sugimura, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

40. Keani Rawlins-Fernandez, Council Vice Chair
Maui County Council
200 South High Street
Wailuku, HI 96793

41. Kelly King, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

42. Gabe Johnson, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

43. Tasha Kama, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

44. Alice Lee, Council Chair
Maui County Council
200 South High Street
Wailuku, HI 96793

45. Mike Molina, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

46. Tamara Paltin, Councilmember
Maui County Council
200 South High Street
Wailuku, HI 96793

47. Ipo Mailou, President
Hāna Community Association
P. O. Box 202
Hāna, HI 96713

48. Michael Grider, Manager, Engineering
Hawaiian Electric
P. O. Box 398
Kahului, HI 96733

49. Hawaiian Telcom
    Plan Review Department
    *Via Email: HT-PlanReviews@hawaiiantel.com*

50. Debbie Cabebe, Chief Executive Officer
    Maui Economic Opportunity
    99 Mahalani Street
    Wailuku, HI 96793

51. Albert Perez, Executive Director
    Maui Tomorrow
    55 North Chuch Street, Suite A4
    Wailuku, HI 96793
    *Via email: director.mauitomorrow@gmail.com*

52. Spectrum
    158 Ma‘a Street
    Kahului, HI 96732

53. Ke‘eaumoku Kapu
    Aha Moku O Maui
    *Via email: kapukapuakea@gmail.com*

54. Sam Akoi
    Aha Moku O Maui
    *Via email: ulupono@gmail.com*

55. Hāna Cultural Center
    P.O. Box 27
    Hana, HI 96713
    *Via Email: mail@hanaculturalcenter.org*

DAVID Y. IGE
GOVERNOR OF HAWAII

ELIZABETH A. CHAR, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
Maui District Health Office
54 South High St. Rm. #301
Wailuku, HI 96793

Lorrin W. Pang, M.D., M.P.H.
District Health Officer

November 23, 2022

Mr. Juan Rivera
Capital Improvements Program Manager
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, Hawaii 96793
{Via email: environmental.mgmt@mauicounty.gov}

Dear Mr. Rivera:

**Subject: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements; Hana, Maui, Hawaii**
**TMK: (2) 1-4-004:031**

Thank you for the opportunity to comment on this project. We have the following comments to offer:

1. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR) Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please contact the Indoor & Radiological Health Branch at 808 586-4700.

2. The proposed individual wastewater system (IWS) must comply with all the provisions of Hawaii Administrative Rules (HAR), Chapter 11-62, Wastewater Systems. If you have any questions regarding the above comments, please contact Roland Tejano, Environmental Engineer, at 808 984-8232.

It is strongly recommended that you review the department's website at https://health.hawaii.gov/epo/landuse/ and contact the appropriate program that concerns your project.

Should you have any questions, please contact me at 808 984-8230 or email me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

Patti Kitkowski
District Environmental Health Program Chief

c: Joanna L. Seto, EMD Chief {via email}
Emily Y.K. Murai, Associate , Munekiyo Hiraga, {via email}

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Patti Kitowski, District Environmental
Health Program Chief
State of Hawai‘i
Maui District Health Office
54 South High Street, Room 301
Wailuku, Hawai‘i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Ms. Kitowski:

Thank you for your comment letter dated November 23, 2022 regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Comment:***

*The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR) Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please contact the Indoor & Radiological Health Branch at 808 586-4700.*

***Response:*** The project will comply with HAR Chapter 11-46, *"Community Noise Control"*. Should a noise permit be required, it will be secured prior to the commencement of work.

***Comment:***

*The proposed individual wastewater system (IWS) must comply with all the provisions of Hawaii Administrative Rules (HAR), Chapter 11-62, Wastewater Systems. If you have any questions regarding the above*

*comments, please contact Roland Tejano, Environmental Engineer, at 808 984-8232.*

**Response:** The project will meet all applicable requirements of the Individual Wastewater System design and specifications of the Hawai‘i Administrative Rules (HAR), Chapter 11-62, Wastewater Systems.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\DOH Maui.docx

DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

JOSH GREEN
LT GOVERNOR
STATE OF HAWAII

WILLIAM J. AILA, JR
CHAIRMAN
HAWAIIAN HOMES COMMISSION

TYLER I. GOMES
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P O BOX 1879
HONOLULU, HAWAII 96805

November 17, 2022 Ref.:PO-22-275

Juan Rivera
Capital Improvements Program Manager
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, HI 96793
environmental.mgmt@mauicounty.gov

Aloha Juan:

Subject: Comments - HRS Chapter 343, and HAR, Title 11, Chapter 200.1
Draft Environmental Assessment for the Proposed
Helene Hall Septic System Improvements
Hāna, Maui County, Hawai'i

The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, due to its lack of proximity to Hawaiian Home Lands, we do not anticipate any impacts to our lands or beneficiaries from the project.

However, we highly encourage all agencies to consult with Hawaiian Homestead community associations and other (N)native Hawaiian organizations when preparing environmental assessments in order to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians.

Mahalo for the opportunity to provide comments. If you have any questions, please contact the Planning Office at (808)620-9500, or via email at: dhhl.planning@hawaii.gov.

Me ke aloha,

William J. Ailā, Jr., Chairman
Hawaiian Homes Commission

C: Emily Y.K. Murai, Associate
Munekiyo Hiraga
planning@munekiyohiraga.com

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Chairman Designate
State of Hawai'i
Department of Hawaiian Home Lands
Hawaiian Homes Commission
P.O. Box 1879
Honolulu, Hawai'i 86805

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i

To Whom It May Concern:

The project received a comment letter from the Department of Hawaiian Home Lands Hawaiian Homes Commission, dated November 17, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Comment:***

*The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, due to its lack of proximity to Hawaiian Home Lands, we do not anticipate any impacts to our lands or beneficiaries from the project.*

***Response:*** We acknowledge that due to the lack of proximity of the proposed project, impacts to Hawaiian Home Lands and beneficiaries are not anticipated.

***Comment:***

*However, we highly encourage all agencies to consult with Hawaiian Homestead community associations and other (N)native Hawaiian organizations when preparing environmental assessments in order to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians.*

Maui: 305 High Street, Suite 104 • Wailuku, Hawaii 96793 • Tel: 808.244.2015 • Fax: 808.244.8729
Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

***Response:*** We appreciate the recommendation to consult with the Hawaiian Homestead community associations and Native Hawaiian Organizations (NHOs) when preparing EAs. We note that the Office of Hawaiian Affairs and Aha Moku o Maui, Hāna Moku has been consulted for this project. In addition, a cultural impact assessment was prepared to assess potential impacts of the proposed project to Native Hawaiian traditional and cultural practices which involved outreach to 45 NHOs.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\DHHL(2).docx

**From:** Cab General <Cab.General@doh.hawaii.gov>
**Sent:** Wednesday, November 23, 2022 2:16 PM
**To:** General eMail; environmental.mgmt@mauicounty.gov
**Subject:** DOH Clean Air Branch Comments on Helene Hall Septic System Improvements--Draft EA

Aloha,

Thank you for the opportunity to review the subject project.
Please see our standard comments at:

https://health.hawaii.gov/cab/files/2022/10/Standard-Comments-for-Land-Use-Reviews-Clean-Air-Branch-2022-3.pdf

Please let me know if you have any questions.

Barry Ching
Clean Air Branch
Hawaii Department of Health
(808) 586-4200

**Standard Comments for Land Use Reviews**
**Clean Air Branch**
**Hawaii State Department of Health**

If your proposed project:

Requires an Air Pollution Control Permit

- You must obtain an air pollution control permit from the Clean Air Branch and comply with all applicable conditions and requirements. If you do not know if you need an air pollution control permit, please contact the Permitting Section of the Clean Air Branch.
- Permit application forms can be found here: https://health.hawaii.gov/cab/permit-application- forms/

Includes construction, demolition, or renovation activities that involve potential asbestos and lead containing materials

- Prior to demolition, you must contact the Indoor and Radiological Health Branch, Asbestos-Lead Section. Testing may be required to determine if asbestos exists in any building materials, such as: drywall, vinyl floor tile, mastic, caulking, roofing materials, insulation, special coatings, etc.
- Structures built prior to 1980 may contain lead paint. Prior to demolition, contact the Indoor and Radiological Health Branch, Asbestos-Lead Section to determine if testing is needed to identify building materials that may contain lead.

Has the potential to generate fugitive dust

- You must reasonably control the generation of all airborne, visible fugitive dust. Note that construction activities that occur near to existing residences, businesses, public areas, and major thoroughfares exacerbate potential dust concerns. It is recommended that a dust control management plan be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. The plan, which does *not* require Department of Health approval, should help you recognize and minimize potential airborne, visible fugitive dust problems.
- Construction activities must comply with the provisions of Hawaii Administrative Rules, §11- 60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance complaints.
- You must provide reasonable measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:
    - Planning the different phases of construction, focusing on minimizing the amount of airborne, visible fugitive dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;

    - Providing an adequate water source at the site prior to start-up of construction activities; Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
    - Minimizing airborne, visible fugitive dust from shoulders and access roads;
    - Providing reasonable dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
    - Controlling airborne, visible fugitive dust from debris being hauled away from the project site.
- If you have questions about fugitive dust, please contact the Enforcement Section of the Clean Air Branch

<u>Increases the population and potential number of vehicles in an area:</u>

- The creation of apartment buildings, complexes, and residential communities may increase the overall population in an area. Increasing the population in an area may inadvertently lead to more air pollution via vehicle exhaust. Vehicle exhaust releases molecules in the air that negatively impact human health and air quality, as they are known lung irritants, carcinogens, and greenhouse gases.
- Ensure that residents keep their vehicle idling time to three (3) minutes or less.
- Consider providing bike racks and/or electric vehicle charging stations that can help reduce air pollution.

| | |
|---|---|
| Clean Air Branch<br>(808) 586-4200<br>cab@doh.hawaii.gov | Indoor Radiological Health Branch<br>(808) 586-4700 |

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Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

***Via email: cab@doh.hawaii.gov***

Barry Ching
State of Hawai‘i
Department of Health
Clean Air Branch
2827 Waimano Home Road, #130
Pearl City, HI 96782

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Mr. Ching:

Thank you for your email, dated November 23, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), thank you for providing the Department of Health, Clean Air Branch standard comments for land use reviews. These comments have been forwarded to the applicant, the County of Maui, Department of Environmental Management, for review. All applicable laws and regulations will be complied with.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\DOH CAB.docx

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Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

**Subject:** FW: Comments for Draft EA Helene Hana Maui
**Attachments:** Draft EA Helene Hana Maui.PDF; STANDARD COMMENTS 2022 updated.pdf

**From:** shwb <shwb@doh.hawaii.gov>
**Sent:** Wednesday, November 2, 2022 9:38 AM
**To:** environmental.mgmt@mauicounty.gov; General eMail <planning@munekiyohiraga.com>
**Subject:** Comments for Draft EA Helene Hana Maui

Aloha,

Attached are our comments for the draft EA for the proposed helen hall septic at Hana, Maui.

Solid and Hazardous Waste Branch
State of Hawaii | Department of Health
2827 Waimano Home Road, #100, Pearl City, HI 96782
Phone Number: (808) 586-4226 | Fax Number: (808) 586-7509

# Solid and Hazardous Waste Branch Standard Comments

November 26, 2018

The Solid and Hazardous Waste Branch administers programs in the areas of:

1) Management of hazardous waste;
2) Management of solid waste; and
3) Regulation of underground storage tanks.

Our general comments on projects are below. For further information about these programs, please contact the Solid and Hazardous Waste Branch at (808) 586-4226. All chapters of the Hawaii Revised Statutes (HRS) are at https://www.capitol.hawaii .gov/hrscurrent/.

## Hazardous Waste Program

- The state regulations for hazardous waste and used oil are in chapters 11-260.1 to 11-279.1, Hawaii Administrative Rules (HAR) [http://health.hawaii.go v/shwb/hwrules/]. These rules apply to the identification, handling, transportation, storage, and disposal of regulated hazardous waste and used oil. Generators, transporters and treatment, storage, and disposal facilities of hazardous waste and used oil must adhere to these requirements. Violations are subject to penalties under chapter 342J, HRS.

## Solid Waste Section

- The Solid Waste Section (SWS) enforces laws and regulations contained in chapters 342H and 3421, HRS, and chapter 11-58.1, HAR, "Solid Waste Management Control" [http://health.hawaii .gov/shwb/solid-waste/].

- The purpose of the rules is to establish minimum standards governing the design, construction, installation, operation, and maintenance of solid waste disposal, recycling, reclamation, and transfer systems.

- All facilities that accept solid wastes are required to obtain a solid waste management permit from the SWS. Examples of the types of facilities governed by these regulations include landfills, transfer stations and convenience centers, recycling facilities, composting facilities, and salvage facilities. Medical waste, infectious waste, and foreign waste treatment facilities are also included.

- Generators of solid waste are required to ensure that their wastes are properly delivered to permitted solid waste management facilities. Managers of construction and demolition projects should require their waste contractors to submit disposal receipts and invoices to ensure proper disposal of wastes.

**Solid and Hazardous Waste Branch Standard**

- Chapters 342H and 3421, HRS, and chapter 11-58.1, HAR, "Solid Waste Management Control" requires the proper management of solid wastes. Generators of solid waste are required to ensure that their wastes are properly delivered to permitted solid waste management facilities. Project managers should require their waste contractors to submit disposal (and recycling) receipts and invoices to ensure proper disposal (or recycling) of wastes.

- Chapter 342G, HRS, encourages the reduction of waste generation, reuse of discarded materials, and the recycling of solid waste. The project developer is highly encouraged to develop a solid waste management plan for each construction project to ensure proper handling of wastes and divert recyclables from being landfilled. Ideally, the plan would seek to maximize waste diversion and minimize disposal. Such plans should include designated areas to promote the collection of reusable and recyclable materials.

**Office of Solid Waste Management**

- The Office of Solid Waste Management (OSWM) administers statewide integrated solid waste management planning activities, which apply to the counties, as well as various recycling programs, e.g., the Glass Advance Disposal Fee (ADF) and Deposit Beverage Container (DBC) Programs. Management of the DBC Program is conducted pursuant to chapter 342G, HRS, which contains compliance and enforcement provisions, and chapter 11-282, HAR, "Deposit Beverage Recycling" [http://health.hawaii.gov/hi5/rules-regulations- additional- links/]. OSWM is also responsible for limited enforcement and compliance of solid waste management facilities that operate primarily as certified DBC redemption centers pursuant to chapter 342H, HRS, and chapter 11-58.1, HAR, "Solid Waste Management Control" [http://health.hawaii.gov/shwb/solid-waste/]. Authority for the integrated solid waste management planning and ADF programs is contained in chapter 342G, HRS.

- Glass Advance Disposal Fee Program: Businesses that import glass containers into Hawaii are required to register with the Department of Health (DOH) and pay a 1.5 cent per container fee. Fee revenue is distributed to the counties for the operation of glass recycling programs.

- Deposit Beverage Container Program: Business that manufacture or import deposit beverage containers into Hawaii are required to register with the DOH and pay the five-cent deposit and one cent container fee on each deposit container. Deposits and fees are deposited into a special fund and are used to reimburse DBC redemption center refunds paid to consumers; and to pay handling fees to redemption/recycling companies to process and recycle collected deposit beverage containers; and to pay program administrative costs.

**Solid and Hazardous Waste Branch Standard**

- The DOH reimburses and pays an associated handling fee for the redemption of DBC. These transactions are conducted only with certified redemption centers. Certification requires obtaining a solid waste management permit from the SWS (which addresses environmental issues) and a certification from the DBC program (which standardizes the redemption process).

- Solid waste management plans seek to maximize waste diversion and minimize disposal. Such plans should include designated areas to promote the collection of reusable and recyclable materials.

**Underground Storage Tank Program**

- The state's underground storage tank (UST) regulations, found in chapter 11-280.1, HAR [http://health.hawaii.gov/shwb/underg round-storage-tanks /], include specific requirements that UST owners and operators must meet when installing, operating, and permanently closing their UST systems and addressing releases from USTs. Violations are subject to penalties under chapter 11-280.1, HAR, and chapter 342L, HRS.

- A permit is required prior to the installation and operation of a UST. Any new UST system that will be installed must have secondary containment with interstitial monitoring. Refer to subchapters 2, 3, 4, and 12 of chapter 11-280.1, HAR. The installation permit expires 1 year from the date of issuance. The operation permit expires 5 years from the date of issuance.

- §11-280.1-50, HAR, requires owners and operators of USTs or tank systems to notify DOH within 24 hours and follow the procedures in §11-280.1-52, HAR, if any of the following occur, with specific exceptions found in the rules:

  1) The discovery by any person of evidence of regulated substances which may have been released at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, or nearby surface water);
  2) Unusual UST system operating conditions observed or experienced (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST, or an unexplained presence of water in the tank); or
  3) Monitoring results from a release detection method required under §§11-280.1-41 or 11-280 .1-42 indicate a release may have occurred.

- For release response actions, responsible parties and their consultants and contractors should follow the applicable guidance in the DOH, Hazard Evaluation Emergency (HEER) Office Technical Guidance Manual, HEER Environmental Action Level (EAL) guidance, and other guidance documents on the DOH HEER Office website [http://eha- web.doh.hawaii.gov /eha-cma/Org/HEER/], including those pertaining to Multi-Increment Sampling of soil, low flow groundwater sampling, soil vapor sampling, and Environmental Hazard Evaluations /Environmental Hazard Management Plans.

For further information about these programs,
please contact the Solid and Hazardous Waste Branch

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VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

October 20, 2022

Mr. Lene Ichinotsubo
State of Hawai'i
Department of Health
Solid and Hazardous Waste Branch
2827 Waimano Road, Suite 100
Pearl City, Hawai'i 96782-1407

SUBJECT: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i

Dear Mr. Ichinotsubo:

On behalf of the County of Maui, Department of Environmental Management, we are providing for review and comment the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements project prepared pursuant to Hawai'i Revised Statutes (HRS), Chapter 343, and Hawai'i Administrative Rules, Title 11, Chapter 200.1.

The Draft EA can be downloaded from the enclosed USB flash drive and was also published in the October 23, 2022 edition of the Environmental Review Program's Environmental Notice bulletin.

We would appreciate any comments you many have on the Draft EA no later than **Tuesday, November 22, 2022.**

Please send your comments to the following:

**Applicant:** Juan Rivera, Capital Improvements Program Manager
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, Hawai'i 96793
environmental.mgmt@mauicounty.gov

**AND**

**Consultant:** Emily Y.K. Murai, Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793
(808) 983-1233
planning@munekiyohiraga.com

Thank you for your participation in the HRS, Chapter 343 environmental review process.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:ab
Enclosure
cc: Juan Rivera, Department of Environmental Management (w/o enclosure)
Sean Klein, Kennedy Jenks (w/o enclosure)
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\Transmittals\DEA Transmittal Letter.docx

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VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Lene Ichinotsubo
State of Hawai'i
Department of Health
Solid and Hazardous Waste Branch
2827 Waimano Road, Suite 100
Pearl City, Hawai'I 96782-1407

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i

Dear Mr. Ichinotsubo:

Thank you for your email, dated November 2, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), thank you for providing the Department of Health, Solid and Hazardous Waste Branch standard comments. These comments have been forwarded to the applicant, the County of Maui, Department of Environmental Management, for review. All applicable laws and regulations will be complied with.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\DOH SHWB.docx

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NOV 16 2022

DAVID Y. IGE
GOVERNOR

KENNETH S. HARA
MAJOR GENERAL
ADJUTANT GENERAL

STEPHEN F. LOGAN
BRIGADIER GENERAL
DEPUTY ADJUTANT GENERAL

STATE OF HAWAII
**DEPARTMENT OF DEFENSE**
**OFFICE OF THE ADJUTANT GENERAL**
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

November 9, 2022

Mr. Juan Rivera
Capital Improvements Program Manager
Department of Environmental Management
County of Maui
One Main Plaza
2200 Main Street, Suite 610
Wailuku, Hawaii 96793

SUBJECT: Draft Environmental Assessment
Helene Hall Septic System Improvements, Hana, Maui, Hawaii
TMK: (2)1-4-004:034, (2)1-4-004:029(por.) and (2)1-4-004:999(por.)

Dear Mr. Rivera:

Thank you for the opportunity to comment on the above project. The State of Hawaii Department of Defense has no comments to offer relative to the project.

Should there be any questions, please contact Mr. Tad T. Nakayama at 808-369-3490 or tad.t.nakayama@hawaii.gov.

Sincerely,

Shao Yu L. Lee, R.A.
Captain, Hawaii National Guard
Chief Engineering Officer

c: Emily Y.K. Murai, Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

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SENIOR ADVISOR

March 8, 2023

Shao Yu I. Lee, R.A., Captain
Hawaii National Guard
Chief Engineering Officer
Department of Defense
3949 Diamond Head Road
Honolulu, Hawaiʻi 96816-4495

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawaiʻi

Dear Mr. Lee:

Thank you for your comment letter, dated November 9, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we acknowledge that the Department of Defense has no comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawaiʻi Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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DAVID Y. IGE
GOVERNOR

KEITH T. HAYASHI
SUPERINTENDENT

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

OFFICE OF FACILITIES AND OPERATIONS

November 17, 2022

Emily Y.K. Murai
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Re: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements; Hana, Maui, Hawaii

Dear Ms. Murai:

Thank you for your letter dated October 20, 2022. The Hawaii State Department of Education previously commented on the proposed Project by the enclosed letter dated July 22, 2021. We do not have additional comments at this time.

Thank you for the opportunity to comment. Should you have any questions, please contact Cori China, of the Facilities Development Branch, Planning Section, at (808) 784-5080 or via email at cori.china@k12.hi.us.

Sincerely,

Roy Ikeda
Interim Public Works Manager
Planning Section

RI:ctc
Enclosure

c: Juan Rivera, Capital Improvements Program Manager, Department of Environmental Management
Facilities Development Branch

DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

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

OFFICE OF FACILITIES AND OPERATIONS

July 22, 2021

Kauanoe Batangan
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Re: Early Consultation for the Helene Hall Septic System Improvements
Hana, Maui, Hawaii TMK (2)1-4-004:029 por. and (2)1-4-004:034

Dear Mr. Kauanoe:

Thank you for your letter dated July 1, 2021. The Hawaii State Department of Education (HIDOE) has the following early consultation comments for the preparation of a Draft Environmental Assessment for the proposed Helene Hall Septic System Improvements (Project) located at Hana, Island of Maui, TMK (2)1-4-004:029 por. and (2)1-4-004:034.

Based upon the information provided, the Project will not impact HIDOE schools.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, School Lands and Facilities Specialist, Facilities Development Branch, Planning Section, at 784-5093 or by email at robyn.loudermilk@k12.hi.us.

Sincerely,

Roy Ikeda
Interim Public Works Manager
Planning Section

RI:rll

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Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Roy Ikeda, Interim Public Works Manager
State of Hawai‘i
Department of Education
P.O. Box 2360
Honolulu, Hawai‘i 96804

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Mr. Ikeda:

Thank you for your comment letter, dated November 17, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we acknowledge that the State of Hawai‘i, Department of Education (HIDOE) previously commented on the proposed project. The comment letter, dated July 22, 2021, noted that based on the information provided, the proposed project will not impact HIDOE schools. Thank you for confirming that the HIDOE has no further comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\DOE.docx

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WAYNE K. KATAYAMA
PAUL J. MEYER

M. KALEO MANUEL
DEPUTY DIRECTOR

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

November 18, 2022

REF: RFD.5752.6

TO: Juan Rivera, Capital Improvements Program Manager
Department of Environmental Management

FROM: M. Kaleo Manuel, Deputy Director
Commission on Water Resource Management

SUBJECT: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements

FILE NO.: RFD.5752.6
TMK NO.: (2) 1-4-004:029, (2) 1-4-004:034 and (2)1-4-004:999(por.)

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://dlnr.hawaii.gov/cwrm.

Our comments related to water resources are checked off below.

[X] 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

[ ] 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

[X] 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.

[X] 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/

[X] 6. We recommend the use of alternative water sources, wherever practicable.

[ ] 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/green-business-program.

[ ] 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf.

[X] 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[ ] 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.

[ ] 11. The Hawaii Water Plan is directed toward the achievement of the utilization of reclaimed water for uses other than drinking and for potable water needs in one hundred per cent of State and County facilities by December 31, 2045 (§174C-31(g)(6), Hawaii Revised Statutes). We strongly recommend that this project consider using reclaimed water for its non-potable water needs, such as irrigation. Reclaimed water may include, but is not limited to, recycled wastewater, gray water, and captured rainwater/stormwater. Please contact the Hawaiʻi Department of Health, Wastewater Branch, for more information on their reuse guidelines and the availability of reclaimed water in the project area.

[X] 12. A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.

[X] 13. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

[ ] 14. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

[ ] 15. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

[ ] 16. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.

[ ] 17. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.

[ ] 18. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

[ ] 19. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

[X] OTHER: Planning -

The proposed water source(s) and projected water demands for the project, both potable and non-potable, should be identified and the calculations used to estimate demands should be provided. A discussion of the potential impacts on water resources and other public trust uses of water should be included, and any proposed mitigation measures described. Water conservation and efficiency measures to be implemented should also be discussed. A description of the local aquifer system should also be provided.

If you have any questions, please contact Ryan Imata of the Regulation Branch at (808) 587-0225 or Katie Roth of the Planning Branch at (808) 587-0218.

c: Emily Y.K. Murai, Associate, Munekiyo Hiraga

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

M. Kaleo Manuel, Deputy Director
State of Hawai'i
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 601
Honolulu, Hawai'i 96809

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i; REF: RFD.5752.6

Dear Mr. Manuel:

Thank you for your comment letter dated November 18, 2022 regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Comment:***

*We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.*

***Response:*** As there are no water system improvements proposed as part of the project, implementation is not anticipated to impact the County of Maui's water service capacity in the vicinity of the project area. As a wastewater infrastructure project consisting of improvements to an existing system, the proposed project will not generate significant new potable or non-potable water demands. There are County of Maui Department of Water Supply (DWS) lines that run beneath Keawa Place and Uakea Road. The project's contractor, once selected, will coordinate with the DWS prior to construction to ensure waterlines are not inadvertently damaged.

Maui: 305 High Street, Suite 104 • Wailuku, Hawaii 96793 • Tel: 808.244.2015 • Fax: 808.244.8729
Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

***Comment:***

*We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.*

***Response:*** Thank you for the recommendation to incorporate water-efficient features. As previously noted, the project will not require water service and thus, will not be installing any water fixtures nor will water practices be affected.

***Comment:***

*We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/.*

***Response:*** A program of Best Management Practices (BMPs) will be implemented during construction to prevent or mitigate runoff that will potentially impact nearby coastal waters. Furthermore, the General Contractor for the project will comply with all applicable provisions of the Hawaiʻi Administrative Rules, Title 11, Chapter 54, “Water Quality Standards,” and Title 11, Chapter 55, “Water Pollution Control”. Any discharges associated with the project construction will comply with State water quality standards (Hawaiʻi Administrative Rules, Chapter 11-54). Prior to construction, the General Contractor will be required to have a Site Specific Spill Prevention Control Plan (SSSPCP) approved by the DEM, Wastewater Reclamation Division. Post-construction, the proposed improvements will help to prevent wastewater from inadvertently leaking out of the facility into the nearby waters.

***Comment:***

*We recommend the use of alternative water sources, wherever practicable.*

***Response:*** As a wastewater improvement project, the proposed project will not generate new significant potable or non-potable water demands.

***Comment:***

*There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.*

***Response:*** The proposed project will be reviewed by the State of Hawaiʻi, Department of Health through the HRS Chapter 343 process.

***Comment:***

*A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.*

***Response:*** The proposed project will not involve the construction of any wells.

***Comment:***

*A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.*

***Response:*** The proposed project does not involve the development of a ground water supply source.

***Comment:***

*The proposed water source(s) and projected water demands for the project, both potable and nonpotable, should be identified and the calculations used to estimate demands should be provided. A discussion of the potential impacts on water resources and other public trust uses of water should be included, and any proposed mitigation measures described. Water conservation and efficiency measures to be implemented should also be*

*discussed. A description of the local aquifer system should also be provided.*

***Response:*** As previously mentioned, the proposed project will not increase existing water demands and is not anticipated to impact public trust uses of water.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\CWRM.docx

DAVID Y. IGE
GOVERNOR
KE KIA'ĀINA

AUDREY HIDANO
COMPTROLLER
KA LUNA HO'OMALU HANA LAULĀ

MEOH-LENG SILLIMAN
DEPUTY COMPTROLLER
KA HOPE LUNA HO'OMALU HANA LAULĀ

STATE OF HAWAI'I | KA MOKU'ĀINA O HAWAI'I
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA 'OIHANA LOIHELU A LAWELAWE LAULĀ
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)22.189

NOV - 1 2022

Mr. Juan Rivera, Capital Improvements Program Manager
County of Maui
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, Hawaii 96793

Dear Mr. Rivera:

Subject: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements, Hana, Maui, Hawaii

Thank you for the opportunity to comment on the subject project. We have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may call Ms. Dora Choy of the Planning Branch at 808) 586-0488.

Sincerely,

CHRISTINE L. KINIMAKA
Public Works Administrator

DC:mo
c: Emily Y.K. Murai, Munekiyo Hiraga
Jeff Pearson, DAGS, MDO

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Christine L. Kinimaka, Public Works Administrator
State of Hawai‘i
Department of Accounting
and General Services
P.O. Box 119
Honolulu, Hawai‘i 96810-0119

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Ms. Kinimaka:

Thank you for your comment letter, dated November 1, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we acknowledge that the Department of Accounting and General Services (DAGS) has no comments to offer at this time and that the proposed project does not impact any DAGS projects or existing facilities.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
K:\DATA\Kennedy Jenks\Helene Hall WW Upgrade\Applications\Draft EA\DEA Response\DAGS.docx

Maui: 305 High Street, Suite 104 • Wailuku, Hawaii 96793 • Tel: 808.244.2015 • Fax: 808.244.8729
Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Nov 21, 2022

Department of Environmental Management
Attn: Mr. Juan Rivera via email: environmental.mgmt@mauicounty.gov
Capital Improvements Program Manager
2200 Main Street, Suite 610
Wailuku, Hawaii 96793

Munekiyo Hiraga
Attn: Ms. Emily Murai, Associate via email: planning@munekiyohiraga.com
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Rivera and Ms. Murai:

SUBJECT: Draft Environmental Assessment for the Proposed **Helene Hall Septic System Improvements** located at Hana, Island of Maui; TMKs: (2) 1-4-004: 034 por., 029 por., and 999 por. on behalf of County of Maui, Department of Environmental Management

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division, (b) Division of Forestry & Wildlife, and (c) Land Division-Maui District on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Oct 26, 2022

**MEMORANDUM**

FROM: ~~TO:~~ **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

TO: ~~FROM:~~ Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Draft Environmental Assessment for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMKs: (2) 1-4-004: 034 por., 029 por., and 999 por.
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on October 23, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link:

https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-10-23-TEN.pdf

Please submit any comments by **November 18, 2022**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at darlene.k.nakamura@hawaii.gov. Thank you.

**BRIEF COMMENTS:**

( ) We have no objections.
( ) We have no comments.
(✓) We have no additional comments.
( ) Comments are included/attached.

Signed: [signature]
Print Name: Carty S. Chang, Chief Engineer
Division: Engineering Division
Date: Nov 14, 2022

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**LAND DIVISION**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Oct 26, 2022

**MEMORANDUM**

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Draft Environmental Assessment for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMKs: (2) 1-4-004: 034 por., 029 por., and 999 por.
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on October 23, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link:

https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-10-23-TEN.pdf

Please submit any comments by **November 18, 2022**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at darlene.k.nakamura@hawaii.gov. Thank you.

**BRIEF COMMENTS:**

( ) We have no objections.
(X) We have no comments.
( ) We have no additional comments.
( ) Comments are included/attached.

Signed: [signature]
Print Name: Daniel Ornellas
Division: MDLO - DLNR
Date: 11/2/22

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

# STATE OF HAWAII
## DEPARTMENT OF LAND AND NATURAL RESOURCES
### LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Oct 26, 2022

## MEMORANDUM

FROM: **DLNR Agencies:**
_X_ Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
___Div. of Boating & Ocean Recreation
_X_ Engineering Division (DLNR.ENGR@hawaii.gov)
_X_ **Div. of Forestry & Wildlife** (rubyrosa.t.terrago@hawaii.gov)
___Div. of State Parks
_X_ Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
_X_ Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
_X_ Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

TO: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Draft Environmental Assessment for the Proposed **Helene Hall Septic System Improvements**
LOCATION: Hana, Island of Maui; TMKs: (2) 1-4-004: 034 por., 029 por., and 999 por.
APPLICANT: Munekiyo Hiraga on behalf of County of Maui, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on October 23, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link:

https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-10-23-TEN.pdf

Please submit any comments by **November 18, 2022**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at darlene.k.nakamura@hawaii.gov. Thank you.

**BRIEF COMMENTS:**

( ) We have no objections.
( ) We have no comments.
( ) We have no additional comments.
(☑) Comments are included/attached.

Signed: *Lainie Berry*
Print Name: LAINIE BERRY, Wildlife Program Mgr.
Division: Division of Forestry and Wildlife
Date: Nov 17, 2022

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

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

**STATE OF HAWAII**
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

November 16, 2022

**MEMORANDUM** *Log no. 3875*

**TO:** RUSSELL Y. TSUJI, Land Administrator
Land Division

**FROM:** LAINIE BERRY, Wildlife Program Manager
Division of Forestry and Wildlife

**SUBJECT: Division of Forestry and Wildlife Comments for the Draft Environmental Assessment (DEA) for the Proposed Helene Hall Septic System Improvements Project on Maui**

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for DEA regarding the proposed Helena Hall septic systems improvements project located in Hana, on the island of Maui, TMK: (2) 1-4-004:034 (por.), 1-4-004:029 (por.), and 1-4-004:999 (por.).The proposed project consists of rehabilitating one aerobic treatment unit (ATU) with a new aeration blower and repurposing the other as a wastewater pump station. The wastewater will then be pumped uphill from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park via an underground 1.5-inch diameter force main that runs approximately 1,500 feet along Keawa Place and Uakea Road. The proposed work to be done along Keawa Place and Uakea Road will take place within existing rights-of-way (ROWs). Upon project completion, the existing cesspools will be abandoned and closed

DOFAW concurs with the mitigation measures included in the DEA intended to avoid construction and operational impacts to State-listed species including the Hawaiian Hoary bat or ʻŌpeʻapeʻa (*Lasiurus cinereus semotus*), Hawaiian Monk Seal (*Monachus schauinslandi*), Green Sea Turtle (*Chelonia mydas*), Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), (*Gallinula chloropus sandvicensis*), Hawaiian Goose or Nēnē (*Branta sandvicensis*), and seabirds. For illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawaiʻi, please visit https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf. We also appreciate the measures outlined to prevent the spread of invasive species and for the use of native plant species. DOFAW provides the following additional comments regarding the potential for the proposed work to affect listed species in the vicinity of the project area.

DOFAW is concerned that improvements to the wastewater treatment facility could attract vulnerable birds to areas that may host nonnative predators such as cats, rodents, and mongooses.

We recommend taking action to minimize predator presence; remove cats, place bait stations for rodents and mongoose, and provide covered trash receptacles. Also, you should consider implementing additional mitigation measures to avoid avian mortality during project design and during operation for the long term.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or paul.m.radley@hawaii.gov.

Sincerely,

Lainie Berry

LAINIE BERRY
Wildlife Program Manager

MUNEKIYO HIRAGA
Planning. Project Management. Sustainable Solutions.

Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Russell Y. Tsuji, Land Administrator
State of Hawai‘i
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai‘i 96809

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Mr. Tsuji:

Thank you for your comment letter, dated October 26, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Engineering Division***

**1. Comment:**

*We have no additional comments.*

**Response:** We acknowledge that the Department of Land and Natural Resources (DLNR) Engineering Division has no additional comments.

***Maui Land Division***

**2. Comment:**

*We have no comments.*

**Response:** We acknowledge that the DLNR Maui Land Division has no comments.

***Division of Forestry and Wildlife***

**3. Comment:**

*DOFAW concurs with the mitigation measures included in the DEA intended to avoid construction and operational impacts to State-listed species including the Hawaiian Hoary bat or ʻŌpeʻapeʻa (Lasiurus cinereus semotus), Hawaiian Monk Seal (Monachus schauinslandi), Green Sea Turtle (Chelonia mydas), Hawaiian Duck (Anas wyvilliana), Hawaiian Stilt (Himantopus mexicanus knudseni), Hawaiian Coot (Fulica alai), (Gallinula chloropus sandvicensis), Hawaiian Goose or Nēnē (Branta sandvicensis), and seabirds. For illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawaiʻi, please visit https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf.*

*We also appreciate the measures outlined to prevent the spread of invasive species and for the use of native plant species. DOFAW provides the following additional comments regarding the potential for the proposed work to affect listed species in the vicinity of the project area.*

**Response:** We acknowledge that DOFAW concurs with the mitigation measures described in the DEA to avoid impacts to State-listed species. We also acknowledge receipt of guidance for seabird-friendly light styles and confirm that these recommendations have been shared with the project team for their use, as applicable.

**4. Comment:**

*DOFAW is concerned that improvements to the wastewater treatment facility could attract vulnerable birds to areas that may host nonnative predators such as cats, rodents, and mongooses. We recommend taking action to minimize predator presence; remove cats, place bait stations for rodents and mongoose, and provide covered trash receptacles. Also, you should consider implementing additional mitigation measures to avoid avian mortality during project design and during operation for the long term.*

**Response:** We acknowledge DOFWA's concerns regarding the potential attraction of vulnerable birds to the project area which may host nonnative predators. The recommended mitigation measures for the minimization of the presence of bird predators and the recommendation to implement additional mitigation measures to avoid avian mortality have been shared with the project team for incorporation into the project, as feasible.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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**MICHAEL P. VICTORINO**
Mayor

**BRADFORD K. VENTURA**
Fire Chief

**GAVIN L.M. FUJIOKA**
Deputy Fire Chief

**DEPARTMENT OF FIRE & PUBLIC SAFETY**
FIRE PREVENTION BUREAU
COUNTY OF MAUI
313 MANEA PLACE
WAILUKU, HI 96793

December 27, 2022

VIA EMAIL: environmental.mgmt@mauicounty.gov
planning@munekiyohiraga.com

Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, HI 96793
Attn: Emily Y.K. Murai

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS**

Dear Emily,

Thank you for the opportunity to review your project. At this time Fire Prevention Bureau has no comments.

Should you have any specific fire related public safety concerns please identify those to us on this or any future projects you would like us to review.

For any questions or comments, please feel free to contact us at (808) 876-4690 or by email at fire.prevention@mauicounty.gov.

Sincerely,

Plans Review - Fire Prevention Bureau

OV:jn

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Fire Prevention Bureau
Department of Fire and Public Safety
County of Maui
313 Manea Place
Wailuku, Hawai‘i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Sir/Madam:

Thank you for your comment letter dated December 27, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we acknowledge that the Fire Prevention Bureau has no comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

MICHAEL P. VICTORINO
Mayor

LORI TSUHAKO
Director

LINDA R. MUNSELL
Deputy Director

NOV 04 2022

**DEPARTMENT OF HOUSING**
**& HUMAN CONCERNS**
COUNTY OF MAUI
2200 MAIN STREET, SUITE 546
WAILUKU, MAUI, HAWAI'I 96793
PHONE: (808) 270-7805

November 1, 2022

Emily Y.K. Murai, Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Murai:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS: HANA, MAUI, HAWAII**

The Department has reviewed the information submitted for the above subject project. Based on our review, we have determined that the project is not subject to Chapter 2.96, Maui County Code, and does not require a residential workforce housing agreement. At the present time, the Department has no additional comments to offer.

Please contact Mr. Buddy Almeida, Housing Administrator at (808) 270-7351 if you have any questions.

Sincerely,

LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

cc: Buddy Almeida, Housing Administrator

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Karlynn K. Fukuda
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Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Lori Tsuhako, LSW, ACSW, Director
County of Maui
Department of Housing and Human Concerns
2200 Main Street, Suite 546
Wailuku, Hawai‘i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Ms. Tsuhako:

Thank you for your comment letter, dated November 1, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), thank you for confirming that the proposed project is not subject to Chapter 2.96, Maui County Code and does not require a residential workforce housing agreement.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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DEC 08 2022

# POLICE DEPARTMENT

## COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, MAUI, HAWAII 96793
TELEPHONE: (808) 244-6400
FAX: (808) 244-6411

**MICHAEL P. VICTORINO**
MAYOR

**JOHN PELLETIER**
CHIEF OF POLICE

**WADE M. MAEDA**
DEPUTY CHIEF OF POLICE

OUR REFERENCE

YOUR REFERENCE

November 22, 2022

Ms. Emily Y.K. Murai
Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

**Re: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements; Hana, Maui, Hawaii**

Dear Ms. Murai:

This is in response to your letter dated October 20, 2022 requesting comments on the Draft Environmental Assessment (EA) for the proposed Helene Hall Septic System Improvements project.

In review of the submitted documents, we have no objectives to the upcoming construction project if it meets the minimal standards set forth by county codes and state laws. We suggest efforts be made to minimize noise, dust, and debris so not to inhibit those whose health and well-being may be affected. We also ask if the roads will be temporarily closed for one lane alternating traffic, the project manager utilize flag men to conduct traffic control and have proper signage posted along the routes during construction.

Thank you for giving us the opportunity to comment on this project.

Sincerely,

Assistant Chief Reid Pursley
for: JOHN PELLETIER
Chief of Police

c: Juan Rivera, CIP Manager, Dept. of Environmental Management

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Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

John Pelletier, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawai‘i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai‘i

Dear Chief Pelletier:

Thank you for your comment letter dated November 22, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Comment:***

*In review of the submitted documents, we have no objectives to the upcoming construction project if it meets the minimal standards set forth by county codes and state laws.*

***Response:*** We confirm that the project will meet all minimal standards set forth by county codes and state laws.

***Comment:***

*We suggest efforts be made to minimize noise, dust, and debris so not to inhibit those whose health and well-being may be affected.*

***Response:*** Construction Best Management Practices (BMPs) will be utilized in efforts to minimize potential impacts from noise, dust, and debris.

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www.munekiyohiraga.com

***Comment:***

*We also ask if the roads will be temporarily closed for one lane alternating traffic, the project manager utilize flag men to conduct traffic control and have proper signage posted along the routes during construction*

***Response:*** A traffic control plan has been developed for the proposed project. The traffic control plan utilizes signs in the construction area and the use of Flagmen, equipped with proper safety clothing and equipment to conduct, control, and manage the traffic entering the work site.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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MICHAEL P. VICTORINO
Mayor

MICHELE CHOUTEAU MCLEAN, AICP
Director

JACKY TAKAKURA
Deputy Director

**DEPARTMENT OF PLANNING**
COUNTY OF MAUI
ONE MAIN PLAZA
2200 MAIN STREET, SUITE 315
WAILUKU, MAUI, HAWAII 96793

December 20, 2022

Ms. Emily Murai, Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Murai:

**SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS LOCATED IN HANA, ISLAND OF MAUI, HAWAII; TMKs: (2) 1-4-004:029(POR.) AND 034(POR.) AND 999(POR.) (RFC2022-00101) (EAC2022-00003)**

The Maui County Planning Department (Department) has reviewed the Draft Environmental Assessment (DEA) for the above-referenced project. The Department has the following comments:

1) We acknowledge that the Maui County Department of Environmental Management is proposing to publish an Environmental Assessment (EA) with an Anticipated Finding of No Significant Impact for upgrading the wastewater reclamations system at Helene Hall in Hana. The proposed scope of work involves relocating some system components to the Hana Ball Park parking lot and wastewater improvements along Keawa Place and Uakea Road rights-of-way (ROW), including the installation of a 1,500-foot-long force main within the shoreline setback area along the Keawa Place ROW to connect the pump station to the new treatment system.

2) The Department is processing an SMA Use Permit (SM1) application and a Shoreline Setback Variance (SSV) application for the work associated with your EA.

3) The DEA states that the Chapter 343 trigger is use of State or County lands or the use of State or County funds. Additionally, use within a shoreline area as defined in Section 205A-41 should be noted as a trigger for the EA.

4) The Department finds that the DEA adequately addresses environmental review compliance relevant for your SSV application.

5) The Department appreciates and recognizes that the project is implementing the Maui Island Plan Action 6.2.2-Action 2, which states "work with the State toward the phase out of cesspools".

6) The Department may have additional comments on your DEA and may provide a supplemental letter. The Department will also conduct further review and provide recommendations throughout the SM1 and SSV permitting process.



MAIN LINE (808) 270-7735 / FACSIMILE (808) 270-7634
CURRENT DIVISION (808) 270-8205 / LONG RANGE DIVISION (808) 270-7214 / ZONING DIVISION (808) 270-7253

We appreciate the opportunity to review your DEA. Should you have any questions, please contact Staff Planner Wesley Bradshaw at wesley.bradshaw@mauicounty.gov or (808) 463-3867.

Sincerely,

MICHELE MCLEAN, AICP
Planning Director

xc: Ann T. Cua, Planning Program Administrator (PDF)
Jordan E. Hart, Zoning Administration and Enforcement Division Program Administrator (PDF)
Wesley Bradshaw, Staff Planner (PDF)
Emily Murai, Munekiyo Hiraga, Consultant (PDF)
Juan Rivera, Department of Environmental Management, Applicant (PDF)
MCM:WCB:lp
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Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Kathleen Aoki, Acting Director
Department of Planning
County of Maui
2200 Main Street, Suite 315
Wailuku, Hawai'i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i

Dear Ms. Aoki:

The proposed project received a comment letter from the Department of Planning (DP) dated December 20, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Comment:***

1. *We acknowledge that the Maui County Department of Environmental Management is proposing to publish an Environmental Assessment (EA) with an Anticipated Finding of No Significant Impact for upgrading the wastewater reclamations system at Helene Hall in Hana. The proposed scope of work involves relocating some system components to the Hana Ball Park parking lot and wastewater improvements along Keawa Place and Uakea Road rights-of-way (ROW), including the installation of a 1,500-foot-long force main within the shoreline setback area long the Keawa Place ROW to connect the pump station to the new treatment system.*

***Response:*** Thank you for your review of the Draft EA. We confirm that your understanding of the project scope is accurate.

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Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

***Comment:***

2. *The Department is processing an SMA Use Permit (SM1) application and Shoreline Setback Variance (SSV) application for the work associated with your EA.*

***Response:*** Thank you for confirming that the subject project's SM1 and SSV applications are being processed by the DP.

***Comment:***

3. *The DEA states that the Chapter 343 trigger is use of State or County lands or the use of State or County funds. Additionally, use within a shoreline area as defined in Section 205-A-41 should be noted as a trigger for the EA.*

***Response:*** We acknowledge that the use within a shoreline area as defined in Section 205-A-41, Hawai'i Revised Statutes (HRS), triggers compliance with Chapter 343, HRS. This will be noted in the Final EA.

***Comment:***

4. *The Department finds that the DEA adequately addresses environmental review compliance relevant for your SSV application.*

***Response:*** Thank you for confirming that the DEA adequately addressed the environmental review compliance for the subject project's SSV application.

***Comment:***

5. *The Department appreciates and recognizes that the project is implementing the Maui Island Plan Action 6.2.2-Action 2, which states "work with the State toward the phase out of cesspools".*

***Response:*** Thank you for your support of the project's implementation of the Maui Island Plan action to "work with the State toward the phase out of cesspools."

***Comment:***

6. *The Department may have additional comments on your DEA and may provide a supplemental letter. The Department will also conduct further review and provide recommendations throughout the SM1 and SSV permitting process.*

***Response:*** We acknowledge that the DP may have additional comments on the Draft EA and will provide further recommendations throughout the SM1 and SSV permitting process for the subject project.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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**MICHAEL P. VICTORINO**
Mayor

**MARC I. TAKAMORI**
Director

**MICHAEL B. DU PONT**
Deputy Director

**DEPARTMENT OF TRANSPORTATION**
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAI'I 96793

TELEPHONE: (808) 270-7511
FAX: (808) 270-7505

October 28, 2022

Juan Rivera, Capital Improvements Program Manager
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 610
Wailuku, HI 96793
environmental.mgmt@mauicounty.gov

Munekiyo Hiraga
Attention: Emily Y.K. Murai, Associate
305 High Street, Suite 104
Wailuku, HI 96793
Email: planning@munekiyohiraga.com

SUBJECT: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i

Dear Mr. Rivera and Ms. Murai,

Thank you for the opportunity to review and comment on the subject project. The Department of Transportation has no comment at this time.

Please feel free to contact me should you have any questions.

Sincerely,

Marc Takamori
Director

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Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy AICP, LEED AP
VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Marc I. Takamori, Director
County of Maui
Department of Transportation
110 Alaʻihi Street, Suite 210
Kahului, Hawaiʻi 96732

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawaiʻi

Dear Mr. Takamori:

Thank you for your comment letter, dated October 28, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we acknowledge that the County of Maui, Department of Transportation has no comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawaiʻi Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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**Maui Economic Opportunity, Inc.**

P.O. Box 2122
Kahului, HI 96733
808-249-2990
Fax: 808-249-2991
www.meoinc.org

Nov. 25, 2022

Juan Rivera
Capital Improvements Program Manager
One Main Plaza
2200 Main St., Suite 610
Wailuku, HI 96793
Email: environmental.mgmt@mauicounty.gov

**Re: Draft Environmental Assessment for the Proposed Helene Hall Septic System Improvements, Hāna, Maui, Hawai'i**

To Whom It May Concern:

The nonprofit Maui Economic Opportunity supports this needed project that will benefit the Hana community, which we serve, and the environment.

MEO anticipates some disruptions to operations with our Hana Office at the Hana Community Center, across the street from the proposed absorption field at Hana Ball Park. Uakea Road, which will be part of the construction scope, is an access road to the MEO facility and the Hana Ball Park.

MEO has operated out of the Hana Community Center for more than 20 years.

As an aside, MEO was forced to leave the Hana Community Center for repairs and improvements on Dec. 31, 2020. The agency returned to the office in October 2022 with the project unfinished – which means MEO will be vacating the premises again in nine months or so. When the office closes again, MEO will have to come up with a contingency plan.

MEO requests that work be done as quickly as possible and without impact to the time table of the community center repair/improvement project. In fact, if there can be coordination between the two projects – with the Hana Community Center and Helene Hall construction performed at the same time – then there would be reduced impact on MEO operations.

Thank you for allowing us to comment on this needed improvement project for the Hana community.

Sincerely,

Debbie Cabebe, SHRM-SCP
Chief Executive Officer

Cc: Emily Y.K. Murai

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VICE PRESIDENT
Tessa Munekiyo Ng AICP
VICE PRESIDENT

Michael T. Munekiyo AICP
SENIOR ADVISOR

March 8, 2023

Debbie Cabebe, SHRM-SCP
Chief Executive Officer
Maui Economic Opportunity, Inc.
P.O. Box 2122
Kahului, Hawai'i 96733

SUBJECT: Response to Draft Environmental Assessment Comments Regarding the Proposed Helene Hall Septic System Improvements; Hāna, Maui, Hawai'i

Dear Ms. Cabebe:

Thank you for your comment letter dated November 25, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Helene Hall Septic System Improvements. On behalf of the Department of Environmental Management (DEM), we offer the following information in response to the comments received.

***Comment:***

*The nonprofit Maui Economic Opportunity supports this needed project that will benefit the Hana community, which we serve, and the environment.*

*MEO anticipates some disruptions to operations with our Hana Office at the Hana Community Center, across the street from the proposed absorption field at Hana Ball Park. Uakea Road, which will be part of the construction scope, is an access road to the MEO facility and the Hana Ball Park.*

*MEO has operated out of the Hana Community Center for more than 20 years. As an aside, MEO was forced to leave the Hana Community Center for repairs and improvements on Dec. 31, 2020. The agency returned to the office in October 2022 with the project unfinished- which means MEO will be vacating the premises again in nine months or so. When the office closes again, MEO will have to come up with a contingency plan. MEO requests that work be done as quickly as possible and without impact to the time table of the community center repair/improvement project. In fact, if there can be coordination between the two projects - with the Hana Community Center and Helene Hall construction performed at the same time- then there would be reduced impact on MEO operations.*

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Oahu: 735 Bishop Street, Suite 412 • Honolulu, Hawaii 96813 • Tel: 808.983.1233
www.munekiyohiraga.com

***Response:*** We appreciate your support of the proposed project and acknowledge that Maui Economic Opportunity (MEO) operates its Hāna Office at the Hāna Community Center, across the street from the proposed absorption field at Hāna Ball Park. We also acknowledge the use of Uakea Road as an access road to the MEO facility and Hāna Ball Park. Due to potential impacts to MEO operations, DEM and the project contractor will coordinate with MEO prior to and during construction and will coordinate with the ongoing Hāna community.

Thank you again for your participation in the Chapter 343, Hawai‘i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

Emily Y.K. Murai
Associate

EYKM:yp
cc: Juan Rivera, Department of Environmental Management
Sean Klein, Kennedy Jenks
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# REFERENCES

# XI

# XI. REFERENCES


County of Maui, 2030 General Plan, Countywide Policy Plan, March 2010.

County of Maui, 2030 General Plan, Maui Island Plan, December 2012.

County of Maui, "County of Maui Zoning", [GIS Polygon Shapefile]. Created by County of Maui. 2021. Retrieved from https://planning.hawaii.gov/gis/download-gis-data-expanded/.

County of Maui, Department of Planning, Hana Community Plan, 1994.

County of Maui, "Island of Maui TMK Parcels", [GIS Polygon Shapefile]. Created by Geographic Decision Systems International and County of Maui. 2021. Retrieved from http://hawaii.gov/dbedt/gis/download.htm.

County of Maui, Office of Economic Development, Maui County Data Book, 2020.

Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel No. 15003, 2021.

Hawai'i Climate Change Mitigation and Adaptation Commission, Hawai'i Sea Level Rise Vulnerability and Adaptation Report. Prepared by Tetra Tech, Inc. and the State of Hawai'i, December 2017.

IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekci, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.

Kennedy Jenks, Memorandum to Juan River, PE (Department of Environmental Management) Regarding Helene Hall Septic System Replacement, Technical Memo KJ 1967003*00, February 13, 2020.

Maui County Code, Title 19, Chapter 19.27A and Chapter 19.31.

SMS, Hawaii Housing Planning Study, 2019, Prepared for Hawaii Housing Finance and Development Corporation, December 2019.

State of Hawai'i, Department of Business, Economic Development and Tourism, Local Area Unemployment Statistics, https://dbedt.hawaii.gov/economic/unemploymentrate-laborforce, September 28, 2022.

State of Hawai‘i, Department of Business, Economic Development and Tourism, Research and Economic Analysis Division, Population and Economic Projections for the State of Hawaii, June 2018.

State of Hawai‘i, Department of Business, Economic Development and Tourism, DBEDT NEWS RELEASE: HAWAI‘I’S SEPTEMBER UNEMPLOYMENT RATE AT 3.5 PERCENT, October 2022.

State of Hawai‘i, Department of Education, Official Enrollment County SY 20-21, 2020.

State of Hawai‘i, Department of Health, Clean Air Branch, Hawaii Greenhouse Gas Emissions Report for 2017, Final Report, April 2021.

State of Hawai‘i, Department of Labor and Industrial Relations, Hawaii’s Unemployment Rate at 4.4 Percent in January, News Release, March 11, 2022.

State of Hawaii, Department of Labor and Industrial Relations, Local Area Unemployment Statistics, https://dbedt.hawaii.gov/economic/unemploymentrate-laborforce/ accessed October 21, 2021.

U.S. Bureau of Census, American Community Survey, 1-Year Estimates, 2019.

U.S. Census Bureau, 2020 Decennial Census, County Subdivision, DEC Redistricting Plan, (PL 94-171).

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

U.S. Environmental Protection Agency, GHG Reporting Program Data, 2020, https://ghgdata.epa.gov/ghgp/main.do, Accessed October 15, 2021.

University of Hawai‘i at Manoa, Cooperative Extension Service, College of Tropical Agriculture and Human Resources, Circular 496, Agricultural Lands of Importance to the State of Hawaii, 1979.

MUNEKIYO HIRAGA

Planning. Project Management. Sustainable Solutions.

# VOLUME II OF II
## (Appendices A to F-3)

# Final Environmental Assessment

## PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS HĀNA, MAUI, HAWAIʻI
### (TMK NOS. (2)1-4-004:034, (2)1-4-004:029(por.), and (2)1-4-004:999(por.)

**Prepared for:**
**County of Maui,**
**Department of Environmental Management**

**February 2023**

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# VOLUME II OF II

## (Appendices A to F-3)

# Final Environmental Assessment

## PROPOSED HELENE HALL SEPTIC SYSTEM IMPROVEMENTS HĀNA, MAUI, HAWAIʻI

### (TMK NOS. (2)1-4-004:034, (2)1-4-004:029(por.), and (2)1-4-004:999(por.)

**Prepared for:**
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**February 2023**

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# List of Appendices (VOLUME II OF II)

**Appendix A.** Construction Plans for Helene Hall and Hāna Ball Park
**Appendix B.** Biological Resources Survey for Helene Hall Septic System Replacement
**Appendix C.** Chapter 6E Submittal Package
**Appendix C-1.** Archaeological Literature Review and Field Inspection
**Appendix C-2.** State Historic Preservation Division Review Letter
**Appendix C-3.** Archaeological Monitoring Plan
**Appendix D.** Cultural Impact Assessment
**Appendix E.** Drainage Memo
**Appendix F-1.** Analysis of the Project's Conformance with the Hawaiʻi State Plan
**Appendix F-2.** Analysis of the Project's Conformance with the Countywide Policy Plan
**Appendix F-3.** Analysis of the Project's Conformance with the Maui Island Plan

# CONSTRUCTION PLANS FOR HELENE HALL AND HĀNA BALL PARK

## APPENDIX

# A

COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION

# HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

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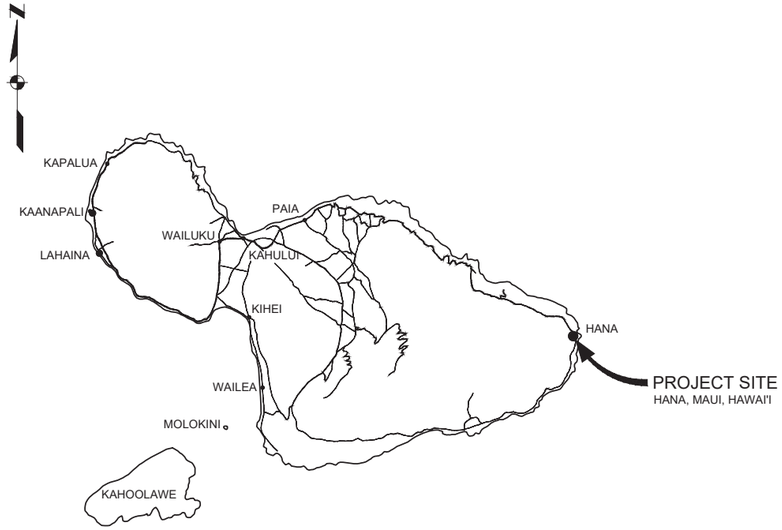
HANA, MAUI, HAWAI'I




VICINITY MAP
SCALE: NTS

APPROVALS

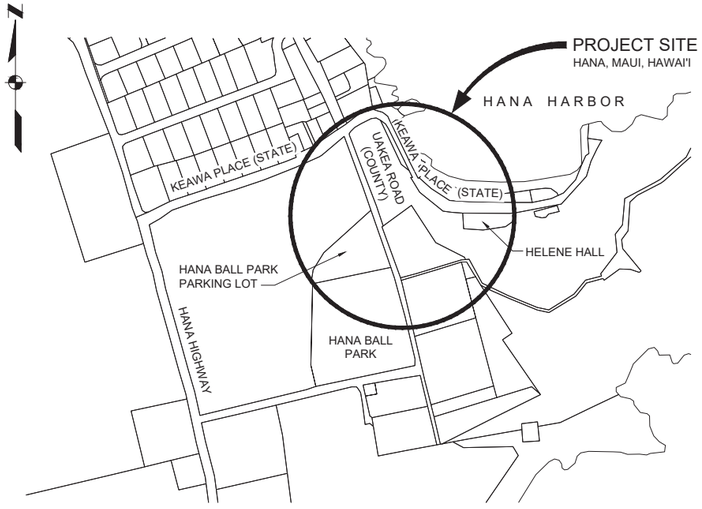
CHIEF ENVIRONMENTAL MANAGEMENT DIVISION
DEPARTMENT OF HEALTH
STATE OF HAWAII — DATE

DIRECTOR, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT,
COUNTY OF MAUI — DATE

DIRECTOR, DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI
(APPROVAL FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY) — DATE

DIRECTOR, DEPARTMENT OF PARKS AND RECREATION
COUNTY OF MAUI — DATE

ADMINISTRATOR, HIGHWAYS DIVISION
STATE DEPARTMENT OF TRANSPORTATION
(APPROVAL GRANTED FOR WORK WITHIN THE STATE RIGHT-OF-WAY ONLY,
ID NO. _____
LETTER OF APPROVAL NO. HWY-CM _____, DATED _____) — DATE




LOCATION MAP
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COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS
Kennedy Jenks

TITLE, VICINITY MAP AND LOCATION MAP

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JOB NO 1967003.00
DATE APRIL 2021
SHEET 1 OF 42
G-1

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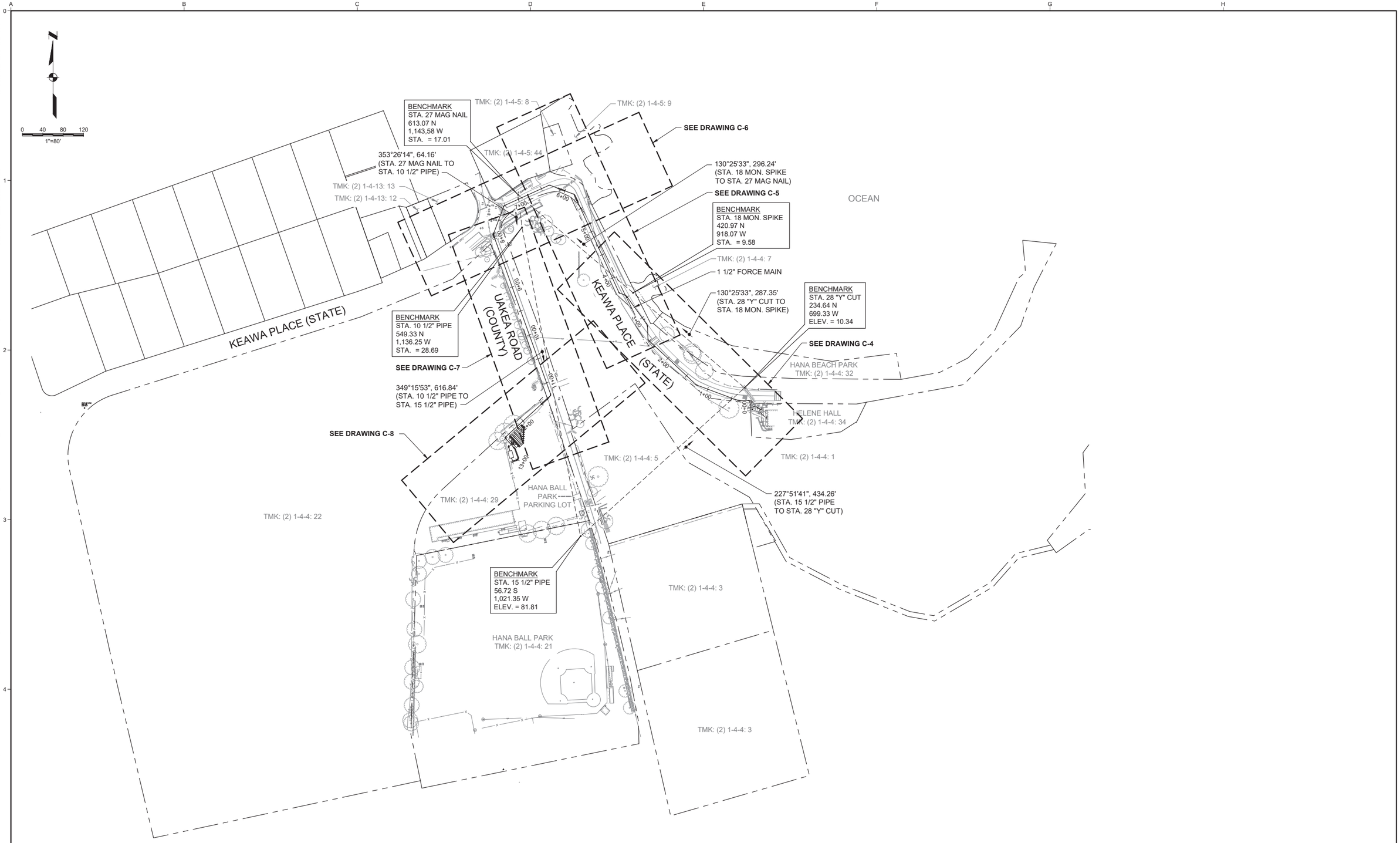


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SEAN K. KLEIN
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COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

Kennedy Jenks

GENERAL SITE AND KEY PLAN

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DATE APRIL 2021
SHEET 8 OF 42
G-8

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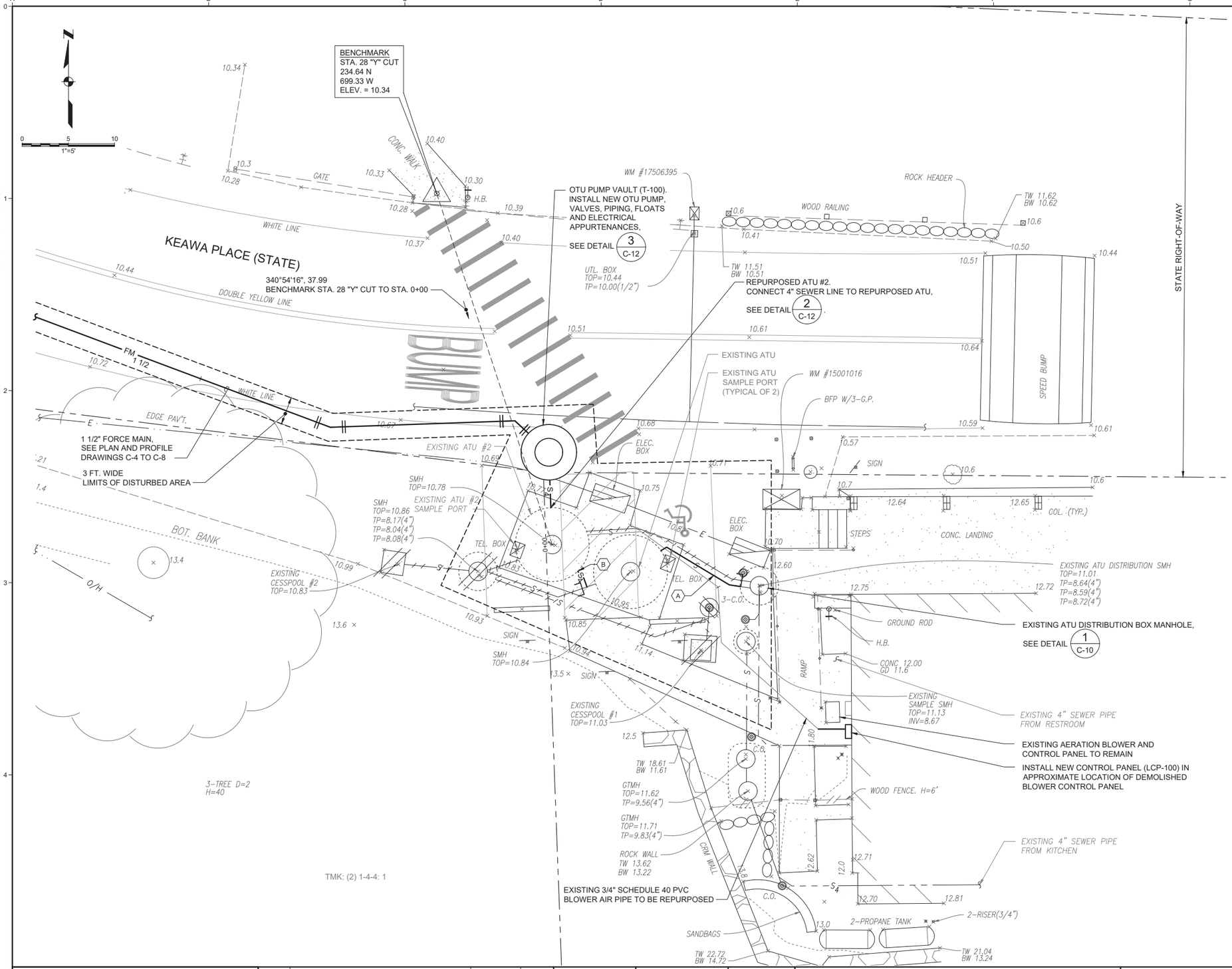


## GENERAL SHEET NOTES

1. THE CONTRACTOR SHALL CONFIRM ALL PIPE AND CONDUIT RUNS BEFORE DEMOLISHING, MODIFYING, REPLACING, OR CAPPING PIPES.

## SHEET KEYNOTES

A. REPLACE WITH A NEW SCHEDULE 40 PVC PIPE. PLACE BACKFILL AND COMPACT PER THE SPECIFICATIONS TO REDUCE PIPE SETTLEMENT AND SAGGING.

B. CONNECT THE EXISTING ATU DISCHARGE PIPE TO THE REPURPOSED ATU, SEE DRAWING C-12 FOR DETAIL. FIELD ADJUST PIPE RUN AS NEEDED TO PROPERLY ALIGN AND SLOPE NEW PIPE.

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SEAN K. KLEIN
LICENSED PROFESSIONAL ENGINEER
No. 12976-C
HAWAII, U.S.A.
APRIL 30, 2022
EXPIRATION DATE OF THE LICENSE

DESIGNED RH, MH
DRAWN CD
CHECKED JH

COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

Kennedy Jenks

HELENE HALL
SITE AND UTILITY PLAN

SCALE 1" = 5'
JOB NO 1967003.00
DATE APRIL 2021
SHEET 14 OF 42
C-1

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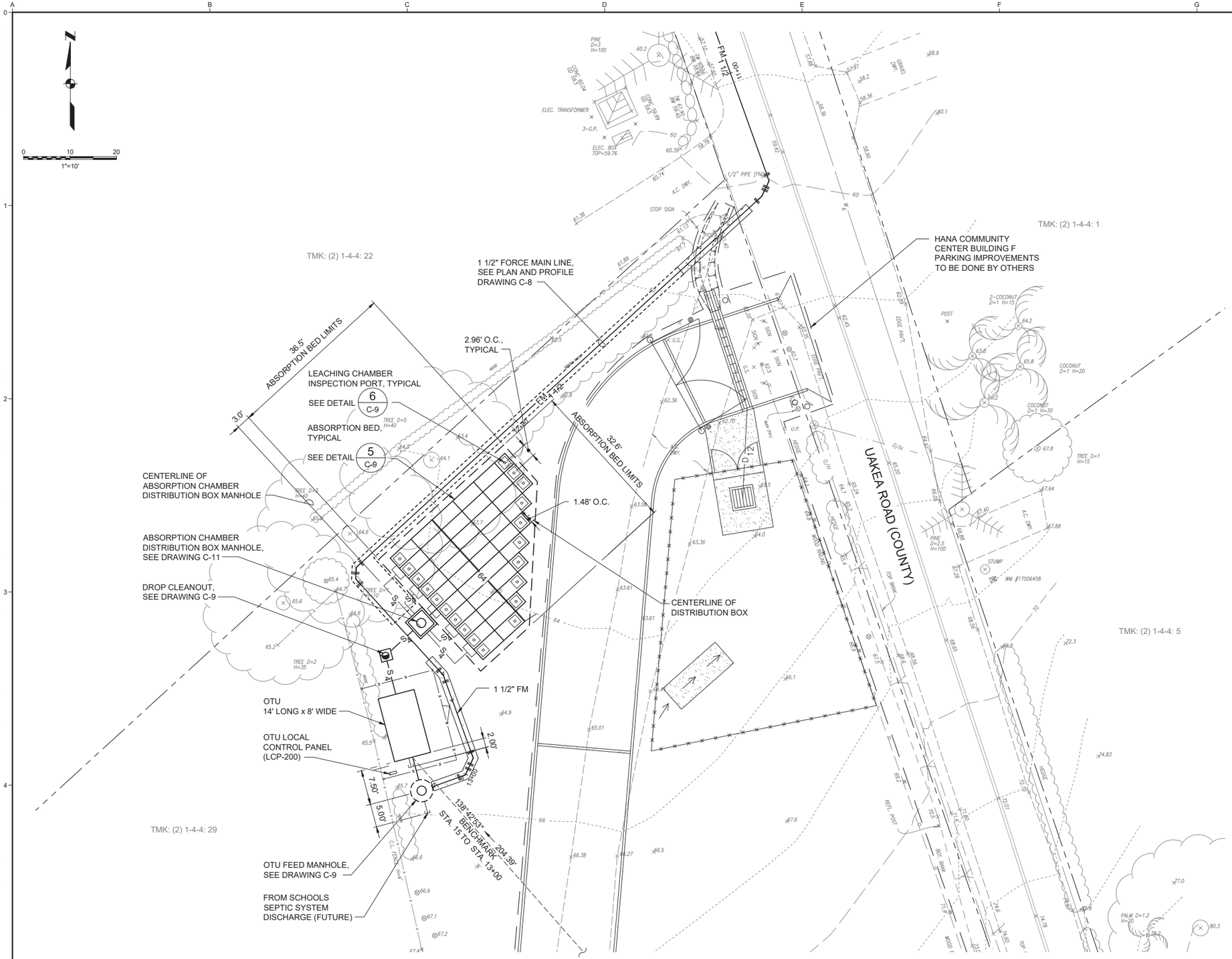


## GENERAL SHEET NOTES

1. FOR BENCHMARKS SEE DRAWING G-8.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION. IF ANY UTILITIES ARE LOCATED IN A LOCATION THAT CONFLICTS WITH THE WORK, NOTIFY THE CONTRACTING OFFICER IMMEDIATELY. IT IS THE RESPONSIBILITY OF THE CONTRACT TO PROTECT UTILITIES TO REMAIN WITHIN THE WORK AREA AND NOT DISRUPT SERVICE.
3. FOR TYPICAL SEWER TRENCH, SEE DETAIL 1 / C-9.
4. PROVIDE TWO 4-INCH INLET CONNECTION ON OTU TANK. ONE INLET SHALL BE USED TO CONNECT NEW WASTEWATER LINE FROM HELENE HALL AND THE SECOND SHALL BE USED AS A FUTURE CONNECTION TO THE SCHOOL'S SEPTIC TANK DISCHARGE LINE.

## DESIGN VALUES

| | |
|---|---|
| DESIGN AVE DAILY FLOW | 1,840 GALLONS PER DAY |
| PERCOLATION RATE | 2 MIN/IN |
| ABSORPTION BED AREA | REQUIRED AREA = 860 SQUARE FEET<br>DESIGN AREA = 900 SQUARE FEET |

REFERENCE:

HAWAII ADMINISTRATIVE RULES, TITLE 11, DEPARTMENT OF HEALTH, CHAPTER 62, WASTEWATER SYSTEMS, MARCH 21, 2016.

4/7/2021

| NO | REVISION | DATE | BY |
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SCALES
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IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

SEAN K. KLEIN
LICENSED PROFESSIONAL ENGINEER
No. 12976-C
HAWAII, U.S.A.
APRIL 30, 2022
EXPIRATION DATE OF THE LICENSE

DESIGNED RH, MH
DRAWN CD
CHECKED JH

COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

Kennedy Jenks

HANA BALL PARK
UTILITY PLAN

SCALE 1" = 10'
JOB NO 1967003.00
DATE APRIL 2021
SHEET 16 OF 42
C-3

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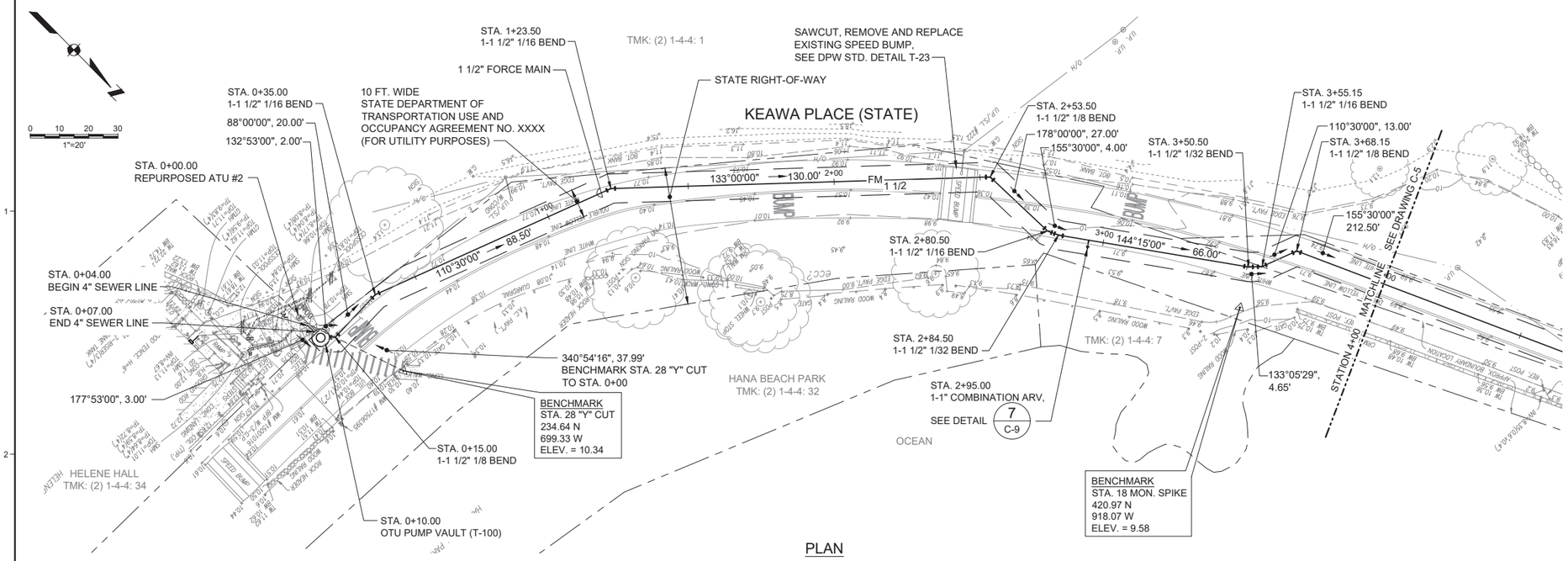
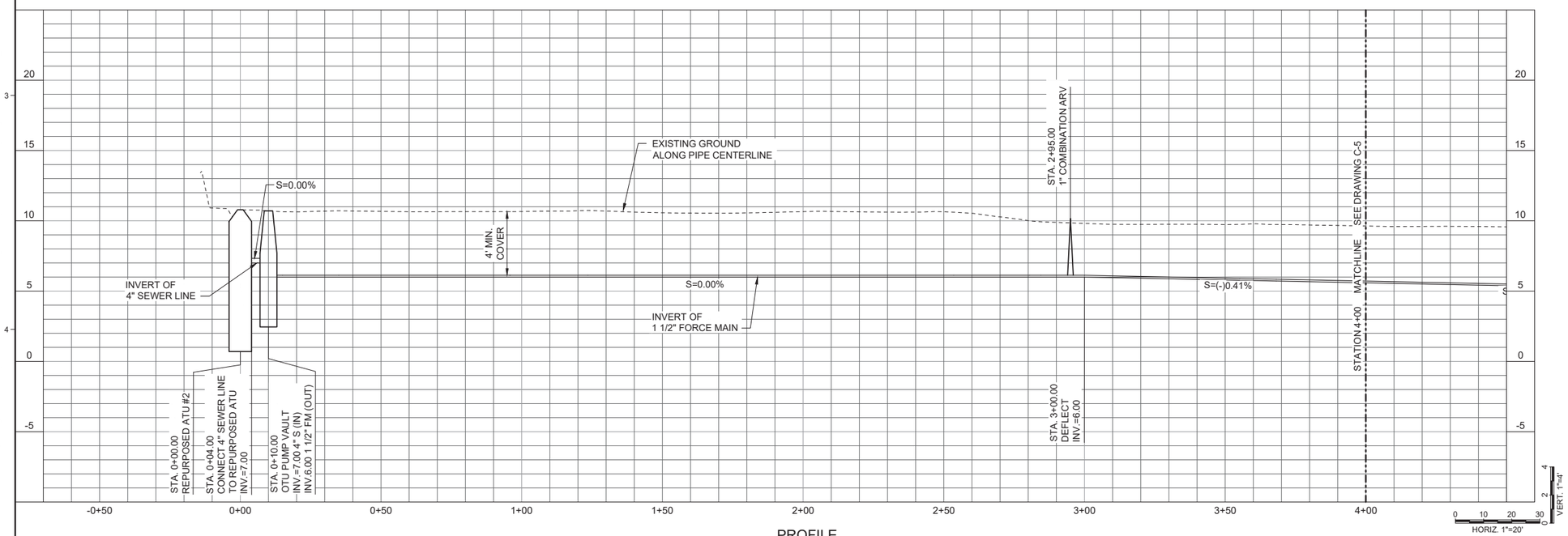



PLAN




PROFILE

## GENERAL SHEET NOTES

1. FOR BENCHMARKS SEE DRAWING G-8.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION. IF ANY UTILITIES ARE LOCATED IN A LOCATION THAT CONFLICTS WITH THE WORK, NOTIFY THE CONTRACTING OFFICER IMMEDIATELY. IT IS THE RESPONSIBILITY OF THE CONTRACT TO PROTECT UTILITIES TO REMAIN WITHIN THE WORK AREA AND NOT DISRUPT SERVICE.
3. FOR TYPICAL SEWER TRENCH, SEE DETAIL 1 / C-9.
4. FOR STRIPING REMOVED DUE TO OPEN TRENCH CONSTRUCTION, RESTRIPING SHALL BE DONE MATCHING PRE-CONDITIONS STRIPING CONDITIONS. SEE DRAWING C-XX FOR RESTRIPING DETAILS.
5. FOR HELENE HALL SITE AND UTILITY PLAN, SEE DRAWING C-1.

4/7/2021

| NO | REVISION | DATE | BY |
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IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

SEAN K. KLEIN
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.
APRIL 30, 2022
EXPIRATION DATE OF THE LICENSE

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DRAWN CD
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COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

Kennedy Jenks

PLAN AND PROFILE
STA. 0+00 TO STA. 4+00

SCALE AS NOTED
JOB NO 1967003.00
DATE APRIL 2021
SHEET 17 OF 42
C-4

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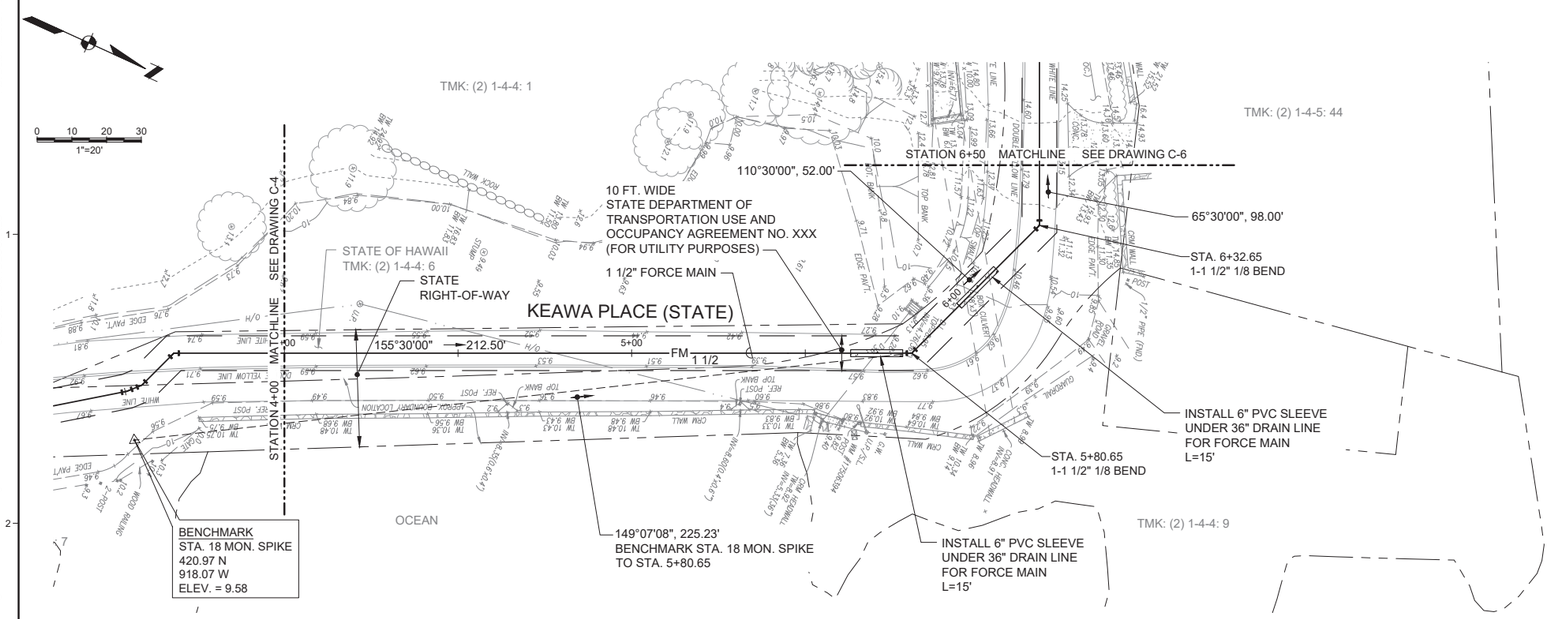


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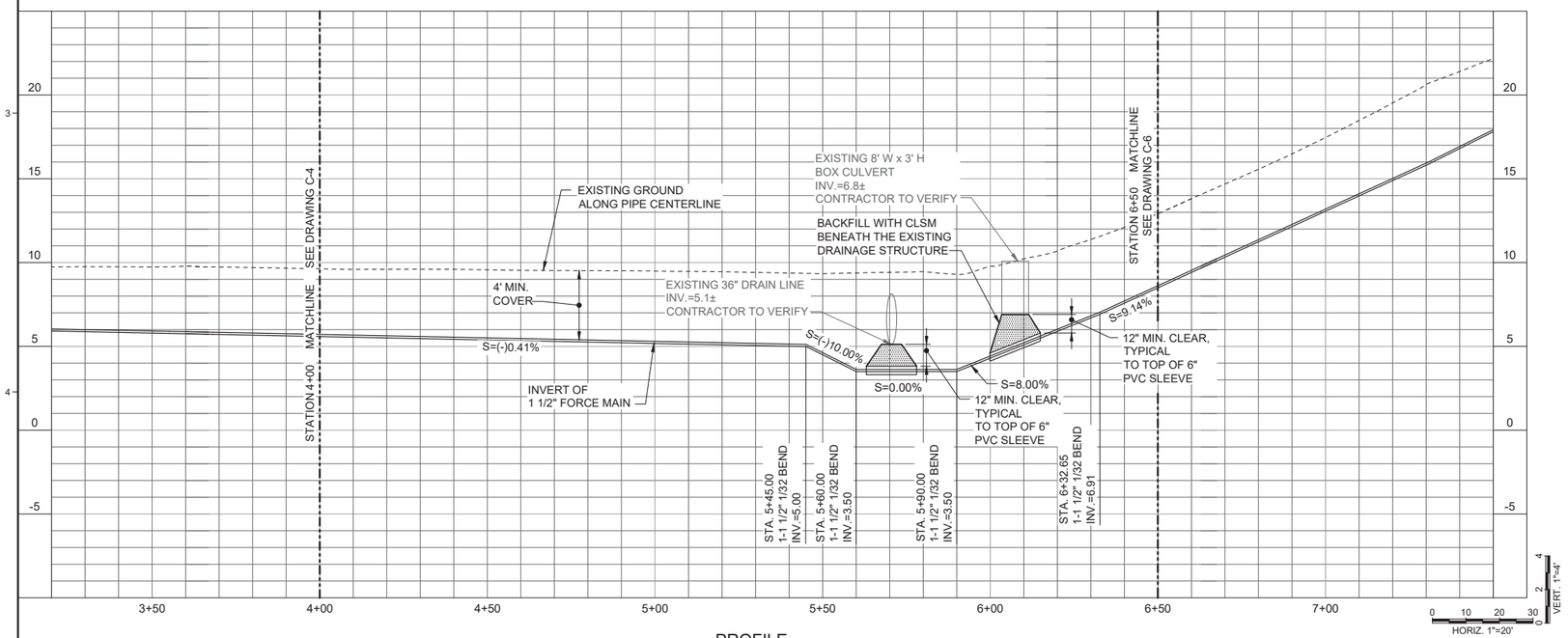


PROFILE

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COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

Kennedy Jenks

PLAN AND PROFILE
STA. 4+00 TO STA. 6+00

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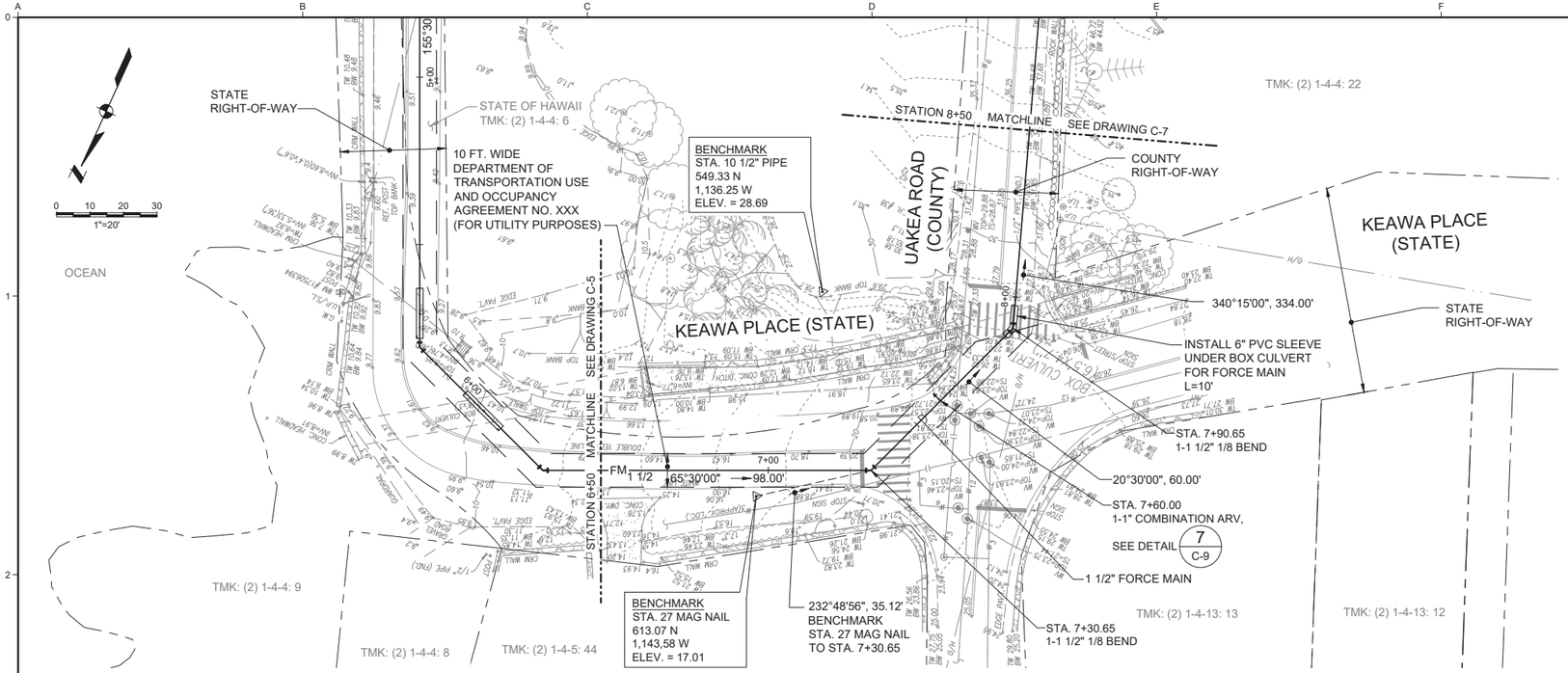
JOB NO 1967003.00
DATE APRIL 2021
SHEET 18 OF 42
C-5




PLAN

## GENERAL SHEET NOTES

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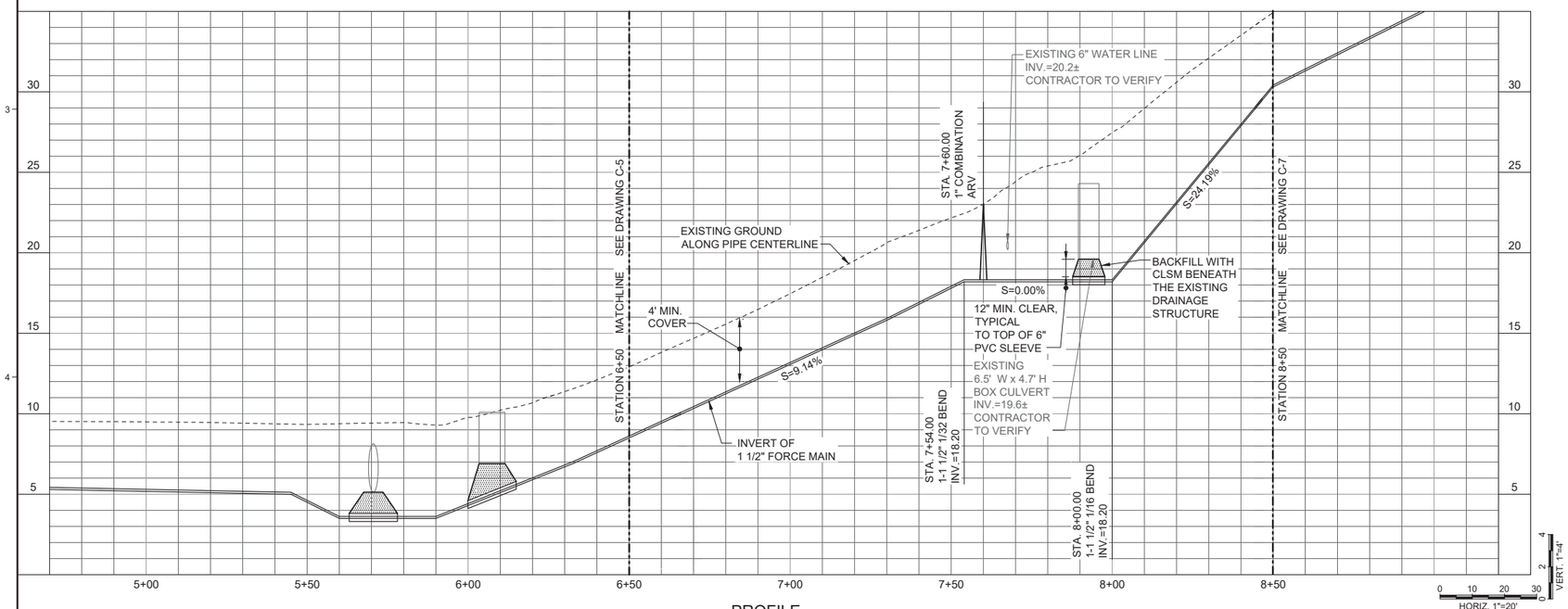


PROFILE

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PLAN AND PROFILE
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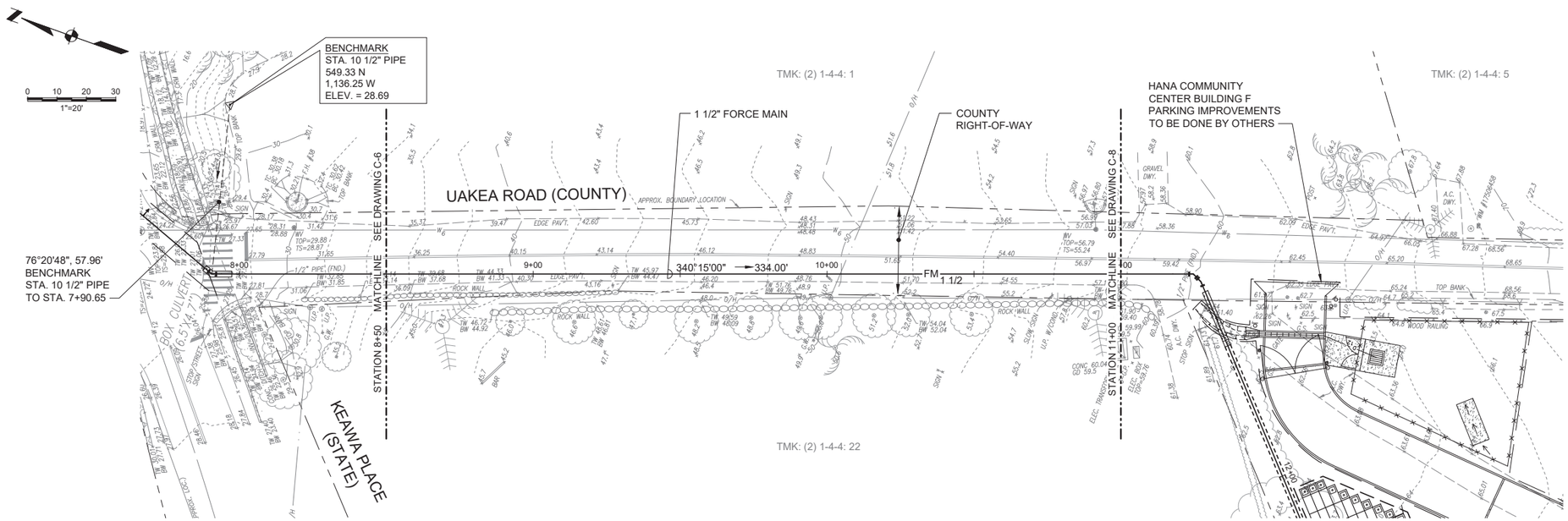


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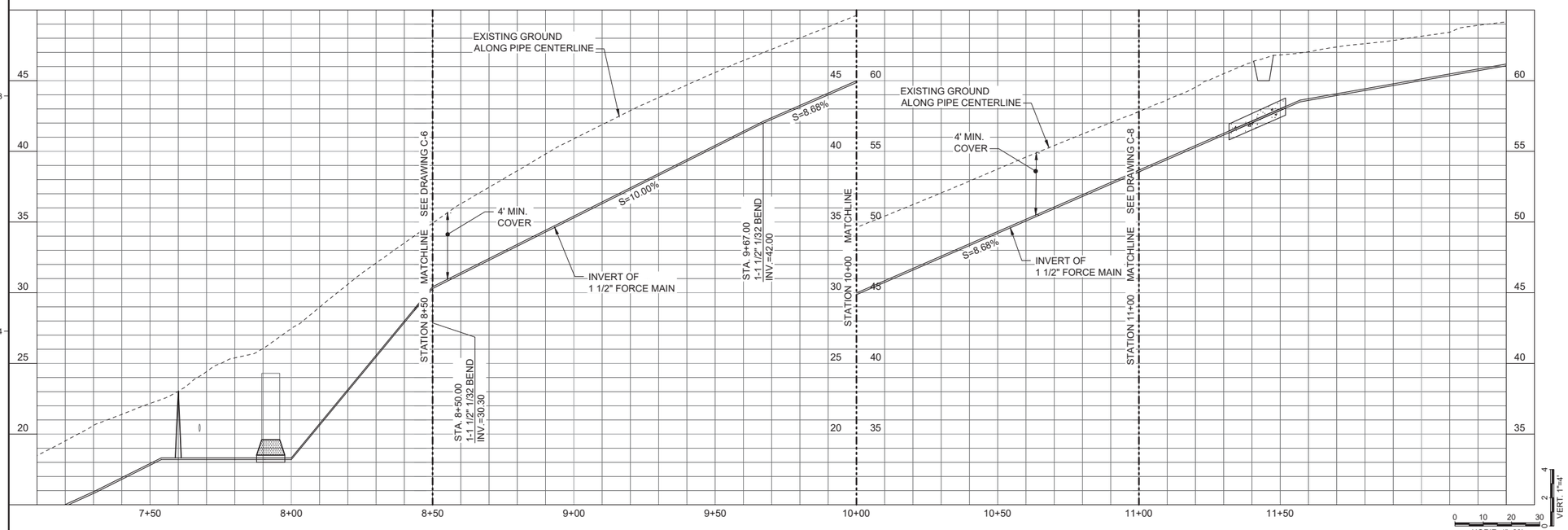


PROFILE

## GENERAL SHEET NOTES

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4/7/2021

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SEAN K. KLEIN
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No.12976-C
HAWAII, U.S.A.
APRIL 30, 2022
EXPIRATION DATE OF THE LICENSE

DESIGNED RH, MH
DRAWN CD
CHECKED JH

COUNTY OF MAUI
ENVIRONMENTAL MANAGEMENT
WASTEWATER RECLAMATION DIVISION
HELENE HALL SEPTIC SYSTEM IMPROVEMENTS

Kennedy Jenks

PLAN AND PROFILE
STA. 8+50 TO STA. 11+00

SCALE AS NOTED
JOB NO 1967003.00
DATE APRIL 2021
SHEET 20 OF 42
C-7

# BIOLOGICAL RESOURCES SURVEY FOR HELENE HALL SEPTIC SYSTEM REPLACEMENT

# APPENDIX B

# BIOLOGICAL RESOURCES SURVEY

**for the**

# HELENE HALL SEPTIC SYSTEM REPLACEMENT

# HĀNA, MAUI

**by**

**ROBERT W. HOBDY**
**ENVIRONMENTAL CONSULTANT**
**Kokomo, Maui**
**April 2021**

**Prepared for:**
**The Department of Parks and Recreation,**
**County of Maui**

# BIOLOGICAL RESOURCES SURVEY
# HELENE HALL SEPTIC SYSTEM REPLACEMENT
# HĀNA, MAUI

## INTRODUCTION

The Helene Hall Septic System Replacement Project lies along a 1,200 foot long corridor between Hāna Ball Park and Helene Hall at Kapueokahi Bay (see Figure 1). It is designed to upgrade and improve the current wastewater treatment facilities. This environmental study was initiated by the County of Maui in compliance with requirements of the planning process.

## SITE DESCRIPTION

The project corridor traverses a moderately sloping route from Hāna Ballpark down `Uakea Road and Keawa Place to Helene Hall. The vegetation consists of roadside grasses, ornamental plantings and some large trees. The soil is characterized entirely as Hana silty clay loam, moderately deep variant, 3 – 15% slopes (Foote et al, 1972). Rainfall averages 65 – 70 inches per year with fairly even year-round distribution (Armstrong, 1983).

## SURVEY OBJECTIVES

This report summarizes the findings of a flora and fauna survey of the proposed Helene Hall Septic System Replacement Project which was conducted in April 2021. The objectives of the survey were to:

1. Document what plant and animal species may occur on the property or may likely occur in the existing habitat.

2. Determine the status and abundance of each species.

3. Determine the presence or likely occurrence of any native flora and fauna, particularly any that are Federally listed as Threatened or Endangered. If such occur, identify what features of the habitat may be essential for these species.

4. Determine if the project area contains any special habitats which if lost or altered might result in a significant negative impact on the flora and fauna in this part of the island.

## FLORA SURVEY REPORT

## SURVEY METHODS

A walk-through flora survey method was used following the proposed roadway corridor. A 40 foot wide corridor was assessed along the 1,200 foot long route. Notes were made on plant species, distribution and abundance as well as on terrain and substrate. A special effort was made to identify any native Hawaiian species and any that might be Federally Endangered or Threatened plants requiring special consideration.

## DESCRIPTION OF THE VEGETATION

The vegetation included a variety of grasses and roadside weeds that are regularly mowed. There were also a number of ornamental shrubs and a few species of trees. A total of 65 plant species were recorded during the survey. Just two species were common: the hardy, salt-tolerant grass, seashore paspalum (*Paspalum vaginatum*) and the large Indian almond tree (*Terminalia catappa*), several of which line the lower part of the road. Seventeen species were uncommon and forty five were rare. Three common, indigenous native Hawaiian plant species were recorded: The naupaka kahakai (*Scaevola taccada*), the nanea (*Vigna marina*) and the pōpolo (*Solanum 3orniculat*). Five early Hawaiian cultural plant introductions included: kukui (*Aleurites moluccana*), noni (*Morinda citrifolia*), niu (*Cocos nucifera*), kī (*Cordyline 3ornicula*) and `ihi`ai (*Oxalis 3orniculate*). Fifty-seven species were non-native plants.

## DISCUSSION AND RECOMMENDATIONS

The vegetation throughout the project corridor is comprised almost entirely of non-native species that are of no special interest or concern. The three indigenous Hawaiian plant species are all common throughout Hawaii and have no particular conservation concern.

No federally Endangered or Threatened plant species (USFWS 2021) were found in the project area, nor were any found that are candidates for such status. No special plant habitats were found here either. No Wetlands as defined by the U.S. Army Corps of Engineers occur on or near the project area.

Because of the above existing conditions there is little of botanical concern, with regards to the property, and the proposed project is not expected to have a significant negative impact on the botanical resources in this part of Maui. No recommendations regarding the flora on this project area are deemed necessary or appropriate.

## FLORA SPECIES LIST

Following is a checklist of all those vascular plant species inventoried during the field studies. Plant families are arranged alphabetically within three groups: Ferns, Monocots and Dicots. Taxonomy and nomenclature of the Ferns are in accordance with Palmer (2003). Taxonomy and nomenclature of the flowering plants (Monocots and Dicots) are in accordance with Wagner et al. (1999) and Staples & Herbst (2005).

For each species, the following information is provided:

1. Scientific name with author citation.

2. Common English or Hawaiian name.

3. Bio-geographical status. The following symbols are used:

   endemic = native only to the Hawaiian Islands; not naturally occurring anywhere else in the world.

   indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).

   Polynesian = all those plants brought to Hawaii by the Polynesians during the course of their migrations.

   non-native = all those plants brought to the islands intentionally or accidentally after western contact.

4. Abundance of each species within the project area:

   abundant = forming a major part of the vegetation within the project area.

   common = widely scattered throughout the area or locally abundant within a portion of it.

   uncommon = scattered sparsely throughout the area or occurring in a few small patches.

   rare = only a few isolated individuals within the project area.

| SCIENTIFIC NAME | COMMON NAME | STATUS | ABUNDANCE |
|---|---|---|---|
| **FERNS** | | | |
| POLYPODIACEAE (Polypody Family) | | | |
| *Phymatosorus grossus* (Langsd. & Fisch.) Brownlie | laua'e | non-native | uncommon |
| PTERIDACEAE (Brake Fern Family) | | | |
| *Pteris vittata* L. | cliff brake | non-native | rare |
| **MONOCOTS** | | | |
| ARACEAE (Aroid Family) | | | |
| *Epipremnum aureum* (Linden & Andre) Bunting | golden pothos | non-native | uncommon |
| *Xanthosoma robustum* Schott | 'ape | non-native | rare |
| ARECACEAE (Palm Family) | | | |
| *Dypsis lutescens* (Wendl.) Beentjie & J. Dransfield | golden fruited palm | non-native | rare |
| ASPARAGACEAE (Asparagus Family) | | | |
| *Cordyline fruticosa* (L.) A. Chev. | ki, ti | Polynesian | rare |
| COMMELINACEAE (Spiderwort Family) | | | |
| *Commelina diffusa* N.L Burm. | honohono | non-native | rare |
| CYPERACEAE (Sedge Family) | | | |
| *Kyllinga brevifolia* Rottb. | kili'o'opu | non-native | uncommon |
| *Kyllinga nemoralis* (J.R. Forster & G. Forster) Dandy | kili'o'opu | non-native | uncommon |
| MUSACACEAE (Banana Family) | | | |
| *Musa acuminata x balbisiana* Colla | banana | non-native | uncommon |
| POACEAE (Grass Family) | | | |
| *Axonopus compressus* (Sw.) P. Beauv. | broad-leaved carpetgrass | non-native | rare |
| *Digitaria ciliaris* (Retz.) Koeler | tropical crabgrass | non-native | rare |
| *Digitaria fuscescens* (K. Presl) Henr. | creeping crabgrass | non-native | rare |
| *Digitaria insularis* (L.) Mez ex Ekman | sourgrass | non-native | rare |
| *Digitaria violascens* Link | smooth crabgrass | non-native | rare |

| SCIENTIFIC NAME | COMMON NAME | STATUS | ABUNDANCE |
|---|---|---|---|
| *Eleusine indica* (L.) Gaertn. | wire grass | non-native | rare |
| *Eragrostis pectinacea* (Michx.) Nees | Carolina lovegrass | non-native | rare |
| *Melinis minutiflora* P. Beauv. | molasses grass | non-native | rare |
| *Paspalum conjugatum* Bergius | Hilo grass | non-native | rare |
| *Paspalum dilatatum* Poir. | Dallis grass | non-native | rare |
| *Paspalum vaginatum* Sw. | seashore paspalum | non-native | common |
| *Sporobolus diander* (Retz.) P. Beauv. | Indian dropseed | non-native | uncommon |
| *Urochloa mutica* (Forssk.) T. Q. Nguyen | California grass | non-native | rare |
| **DICOTS** | | | |
| ACANTHACEAE (Acanthus Family) | | | |
| *Asystasia gangetica* (L.) T. Anderson | asystasia | non-native | rare |
| *Graptophyllum pictum* (L.) Griffith | eldorado | non-native | uncommon |
| *Pseuderathemum carruthersii* (Seemann) Guillaumin | atropurpureum | non-native | rare |
| APIACEAE (Parsley Family) | | | |
| *Centella asiatica* (L.) Urb. | Asiatic pennywort | non-native | uncommon |
| ARALIACEAE (Ginseng Family) | | | |
| *Polyscias guillfoylei* (W. Bull) L.H. Bailey | panax | non-native | uncommon |
| *Schefflera actinophylla* (Endl.) Harms | octopus tree | non-native | rare |
| ASTERACEAE (Sunflower Family) | | | |
| *Emilia sonchifolia* (L.) DC. | pink pualele | non-native | uncommon |
| *Erigeron bellioides* DC. | bellorita | non-native | uncommon |
| *Sphagneticola trilobata* (L.) Pruski | wedelia | non-native | rare |
| *Youngia japonica* (L.) DC. | oriental hawskbeard | non-native | uncommon |
| BIGNONIACEAE (Bignonia Family) | | | |
| *Spathodea campanulata* P. Beauv. | African tulip tree | non-native | rare |

| SCIENTIFIC NAME | COMMON NAME | STATUS | ABUNDANCE |
|---|---|---|---|
| BRASSICACEAE (Mustard Family) | | | |
| *Lepidium virginicum* L. | virginia pepperwort | non-native | rare |
| CANNABACEAE (Hemp Family) | | | |
| *Trema orientalis* (L.) Blume | gunpowder tree | non-native | rare |
| COMBRETACEAE (Indian Almond Family) | | | |
| *Terminalia catappa* L. | Indian almond | non-native | common |
| EUPHORBIACEAE (Spurge Family) | | | |
| *Acalypha wilkesiana* Muller | beefsteak plant | non-native | rare |
| *Aleurites moluccana* (L.) Willd. | kukui | Polynesian | rare |
| *Codiaeum variegatum* (L.) Blume | croton | non-native | uncommon |
| *Euphorbia hirta* L. | hairy spurge | non-native | rare |
| FABACEAE (Pea Family) | | | |
| *Chamaecrista nictitans* (L.) Moench | partridge pea | non-native | rare |
| *Desmodium tortuosum* (Sw.) DC. | Florida beggarweed | non-native | rare |
| *Desmodium triflorum* (L.) DC. | three-flowered beggarweed | non-native | rare |
| *Leucaena leucocephala* (Lam.) de Wit | koa haole | non-native | rare |
| *Macroptilium lathyroides* (L.) Urb. | cow pea | non-native | rare |
| *Vigna marina* (J. Burm.) Merr. | nanea | indigenous | rare |
| GOODENIACEAE (Goodenia Family) | | | |
| *Scaevola taccada* (Gaertn.) Roxburg | naupaka kahakai | indigenous | uncommon |
| LAURACEAE (Laurel Family) | | | |
| *Persea americana* Mill. | avocado | non-native | rare |
| MORACEAE (Mulberry Family) | | | |
| *Ficus microcarpa* L. fil. | Chinese banyan | non-native | rare |
| OCHNACEAE (Ochna Family) | | | |
| *Ochna thomasiana* Engl. & Gilg | mickey mouse plant | non-native | rare |

| SCIENTIFIC NAME | COMMON NAME | STATUS | ABUNDANCE |
|---|---|---|---|
| OXALIDACEAE (Wood Sorrel Family) | | | |
| *Oxalis corniculata* L. | 'ihi'ai | Polynesian | rare |
| *Oxalis debilis* Kunth | pink wood sorrel | non-native | uncommon |
| PHYLANTHACEAE (Phyllanthus Family) | | | |
| *Phyllanthus debilis* Klein ex Willd. | niruri | non-native | rare |
| PHYTOLACCACEAE (Pokeweed Family) | | | |
| *Rivina humilis* L. | coral berry | non-native | uncommon |
| PLANTAGINACEAE (Plantain Family) | | | |
| *Plantago major* L. | broad-leaved plantain | non-native | rare |
| PORTULACACEAE (Purslane Family) | | | |
| *Portulaca oleracea* L. | common purslane | non-native | rare |
| PRIMULACEAE (Primrose Family) | | | |
| *Anagallis arvensis* L. | scarlet pimpernel | non-native | rare |
| RUBIACEAE (Coffee Family) | | | |
| *Morinda citrifolia* L. | noni | Polynesian | rare |
| *Spermacoce assurgens* Ruiz & Pav. | buttonweed | non-native | uncommon |
| *Spermacoce latifolia* Aubl. | broad leaved buttonweed | non-native | rare |
| SOLANACEAE (Nightshade Family) | | | |
| *Solanum americanum* Mill. | pōpolo | indigenous | rare |
| URTICACEAE (Nettle Family) | | | |
| *Pilea microphylla* (L.) Liebm. | artillery plant | non-native | rare |
| VERBENACEAE (Verbena Family) | | | |
| *Stachytarpheta cayennensis* (Rich.) Vahl | nettle-leaved vervain | non-native | rare |

## FAUNA SURVEY REPORT

## SURVEY METHODS

A walk-through fauna survey method was conducted in conjunction with the flora survey. All parts of the project area within the corridor were covered. Field observations were made with the aid of binoculars and by listening to vocalizations. Notes were made on species, abundance, activities, and location as well as observations of trails, tracks, scat and signs of feeding. In addition, an evening visit was made to the area to record crepuscular activities and vocalizations and to see if there was any evidence of occurrence of the Endangered `Ōpe`ape`a or Hawaiian hoary bat (*Lasiurus cinereus semotus*) in the area.

## RESULTS

### MAMMALS

Two species of mammals were observed in the project area during two site visits. Taxonomy and nomenclature follow Tomich (1986). Species observed included: domestic cats (*Felis catus*) and the mongoose (*Herpestes auropunctatus*).

While not seen during the survey, rats (*Rattus* spp.), mice (*Mus domesticus*) and domestic dogs (*Canis familiaris*) would be expected to occur on the project area. Rats and mice feed on fruits, seeds and herbaceous vegetation, while cats and mongoose would hunt for these rodents and birds.

A special effort was made to detect any occurrence of the Hawaiian hoary bat by conducting an evening survey at two locations in the area. A bat detecting device (Batbox IIID) was employed, set to the frequency of 27,000 Hertz that these bats are known to use when echolocating for flying nocturnal insects. No bats were detected with the use of this device.

### BIRDS

Birdlife was modest in both species diversity as well as in total numbers within the project corridor. Seven species of birds were recorded during two site visits. Taxonomy and nomenclature follow the American Ornithological Society (2021). Three species were common: the common myna (*Acridotheres tristis*), the zebra dove (*Geopelia striata*) and the house sparrow (*Passer domesticus*). Four other species were of rare occurrence: the kōlea or Pacific golden plover (*Pluvialis fulva*), the spotted dove (*Streptopelia chinensis*), the house finch (*Haemorhous mexicanus*) and the red-crested cardinal (*Paroaria coronata*). The kōlea is an indigenous, migratory species that overwinters in Hawaii and then flies up to the artic during the summer to breed and raise their young.

No other native forest birds, seabirds, water birds or the nēnē or Hawaiian goose were seen, nor are they likely to occur in this habitat.

## INSECTS

Insects were only seen in small numbers in this habitat. Just five non-native insects were observed during two site visits. Taxonomy and nomenclature follow Nishida et al (1992). Four species were uncommon: monarch butterfly (*Danaus plexippus*), the long-tailed blue butterfly (*Lampides boeticus*), the southern house mosquito (*Culex quinquefasciatus*) and the dung fly (*Musca sorbens*). The honeybee (*Apis mellifera*) was of rare occurrence. No native insect species were seen.

## DISCUSSION AND RECOMMENDATIONS

The fauna within this project area is primarily non-native in character. Just one indigenous native bird species the kōlea, was recorded. Thousands of kōlea migrate to Hawaii during the winter months and can be found in a wide range of habitats on all of the islands. They are quite common and are not of any particular environmental concern.

There are also two species of protected seabirds, the Endangered ʻuaʻu or Hawaiian petrel *Pterodroma sandwichensis*) and the Threatened ʻaʻo or Newell's shearwater (*Puffinus newelli*) that nest in burrows high in the mountains. They would not physically land in the project area but do fly over the coastal lowlands to and from their burrows at dusk and at dawn respectively. Young fledglings in particular can be drawn to and confused by bright lights and crash into or around light structures with fatal results. It is recommended that any significant outdoor lighting that may be associated with this project be hooded to direct the light downward to mitigate this threat.

## FAUNA SPECIES LIST

Following is a checklist of the animal species inventoried during the field work. Animal species are arranged in descending abundance within three groups: Mammals, Birds and Insects. For each specie the following information is provided:

1. Common name.

2. Scientific name.

3. Bio-geographical status. The following symbols are used:

   endemic = native only to Hawaii; not naturally occurring anywhere else in the world.

   indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).

   non-native = all those animals brought to Hawaii intentionally or accidentally after western contact.

   migratory = spending a portion of the year in Hawaii and a portion elsewhere. In Hawaii, the migratory birds are usually in the overwintering/non- breeding phase of their life cycle.

4. Abundance of each species within the project area:

   abundant = many flocks or individuals seen throughout the area at all times of day.

   common = a few flocks or well scattered individuals throughout the area.

   uncommon = only one flock or several individuals seen within the project area.

   rare = only one or two seen within the project area.

| SCIENTIFIC NAME | COMMON NAME | STATUS | ABUNDANCE |
|---|---|---|---|
| **MAMMALS** | | | |
| FELIDAE (Cat Family) | | | |
| *Felis catus* L. | domestic cat | non-native | uncommon |
| VIVERRIDAE (Mongoose Family) | | | |
| *Herpestes auropunctatus* Hodgson | mongoose | non-native | uncommon |
| | | | |
| **BIRDS** | | | |
| CHARADRIIDAE (Plover Family) | | | |
| *Pluvialis fulva* Gmelin | kōlea, Pacific golden-plover | indigenous | rare |
| COLUMBIDAE (Dove Family) | | | |
| *Geopelia striata* L. | zebra dove | non-native | common |
| *Streptopelia chinensis* Scopoli | spotted dove | non-native | rare |
| FRINGILLIDAE (Cardueline Finch Family) | | | |
| *Haemorhous mexicanus* Muller | house finch | non-native | rare |
| PASSERIDAE (Sparrow Family) | | | |
| *Passer domesticus* L. | house sparrow | non-native | uncommon |
| STURNIDAE (Starling Family) | | | |
| *Acridotheres tristis* L. | common myna | non-native | common |
| THRAUPIDAE (Tanager Family) | | | |
| *Paroaria coronata* Miller | red-crested cardinal | non-native | rare |

| SCIENTIFIC NAME | COMMON NAME | STATUS | ABUNDANCE |
|---|---|---|---|
| INSECTS | | | |
| Order DIPTERA - flies | | | |
| CULICIDAE (Mosquito Family) | | | |
| *Culex quinquefasciatus* Say | Southern house mosquito | non-native | uncommon |
| MUSCIDAE (House Fly Family) | | | |
| *Musca sorbens* Wiedemann | dung fly | non-native | uncommon |
| | | | |
| Order HYMENOPTERA - bees, wasps, ants | | | |
| APIDAE (Honey Bee Family) | | | |
| *Apis mellifera* L. | honey bee | non-native | rare |
| | | | |
| Order LEPIDOPTERA - butterflies, moths | | | |
| LYCAENIDAE (Gossamer-winged Butterfly Family) | | | |
| *Lampides boeticus* L. | long-tailed blue butterfly | non-native | uncommon |
| NYMPHALIDAE (Brush-footed Butterfly Family) | | | |
| *Danaus plexippus* L. | monarch butterfly | non-native | uncommon |

Figure 1. Helene Hall Septic System Replacement project area

## Literature Cited


American Ornithological Society, 2021. Checklist of North American Birds. 7th edition. American Ornithological Society. Washington D.C.

Armstrong, R. W. (ed.), 1983. Atlas of Hawaii. (2nd. ed.) University of Hawaii Press.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens, 1972. Soil survey of the islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. U.S. Dept. of Agriculture, Soil Conservation Service. Washington, D.C.

Nishida, G.M., G.A. Samuelson, J.S. Strazanac, K.S. Kami, 1992. Hawaiian Terrestrial Anthropod Checklist. Hawaiian Biological Survey.

Palmer, D.D. 2003. Hawaii's Ferns and Fern Allies. University of Hawaii Press. Honolulu.

Staples, G.W. and D.R. Herbst, 2005. A Tropical Garden Flora, Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press.

Tomich, P.Q. 1986. Mammals in Hawaii. Bishop Museum Press, Honolulu.

U.S. Fish and Wildlife Service, 2021. Endangered and Threatened Wildlife and Plants. Listings and Occurrences for Hawaii. www.fws.gov/endangered

Wagner, W. L., D.R. Herbst, and S. H. Sohmer, 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press and Bishop Museum Press. Honolulu.

# CHAPTER 6E
# SUBMITTAL PACKAGE

## APPENDIX

# C

COUNTY OF MAUI
**DEPARTMENT OF PUBLIC WORKS**
**DEVELOPMENT SERVICES ADMINISTRATION**
250 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

DATE: June 7, 2021

RE: REQUEST FOR PROJECT REVIEW

TO: HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

PROJECT: HELENE HALL SEPTIC SYSTEM IMPROVEMENTS
TMK (2) 1-4-004:034
WTP T2021/0025

Per Hawaii Revised Statutes, Section 6E-42, the Department of Public Works, County of Maui is requesting review of the subject project. Detailed project information (e.g. plans, applications, etc.) is being provided through HICRIS.

Please contact the Development Services Administration at (808) 270-7379 if you have any questions.

*Lance Nakamura*

Development Services Administration
Department of Public Works
County of Maui
250 South High Street
Wailuku, HI 96793

# Project Summary

**Project Name**

Helene Hall Septic System Improvements TMK (2) 1-4-04:034 WTP T2021/0025

**Log Number**

No data

**Project Description**

Due to malfunctions of the Helene Hall Septic System, the existing septic system will be modified and wastewater will be routed to a new septic system being installed by the Hana Ball Park parking lot. Of the two malfunctioning ATUs, one will be rehabilitated with a new aeration blower and the other will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1-1/2" in diameter and buried within the existing roadway before reaching a new septic system that will be installed by the Hana Ball Park parking lot.

**Comments**

No data

| Date Created | Created By | Date Closed | Closed By |
|---|---|---|---|
| 06/08/2021 | Phyllis Cayan | No data | No data |

✔ Involves Ground Disturbance

**Proposed Ground Disturbance Description**

1) Helene Hall (TMK 1-4-04: 34): Ground disturbance on this site will involve the removal and upgrading of a septic system (consisting of two ATUs) that is not functioning properly. 2) Hana Ball Park parking lot (TMK 1-4-04: 29): A septic system and leaching field will be installed on the northern side of the parking lot. Excavation for the leaching field will cover approximately 1000 square feet, with a maximum excavation depth of 6.5 linear feet. 3) Approximately 1500 linear feet of 1.5-inch sewer main will be installed between Helene Hall and Hana Ball Park along State Highway Keawa Place and Uakea Road. The sewer line will be installed at a depth ranging from approximately 3 feet to a maximum depth of 9.5 feet (at Station 8+00) below the ground surface. Typical trenching width will be 10 linear feet.

✔ Previous Ground Disturbance

**Previous Ground Disturbance Description**

1) Helene Hall is a developed area with a building and in-ground septic system on site. 2) Hana Ball Park parking lot is an open field with a paved driveway and grassy, compacted parking area. A building with restrooms runs along the southern side of the property. 3) The 1.5" sewer force main will be installed under the existing road of Keawa Place (Hawaii State highway) and Uakea Road (Maui County road).

Resources In Project Area

**Determination 106**

No data

**Determination 106 Comment**

No data

**Date Opinion 106**

No data

**Determination 6E**

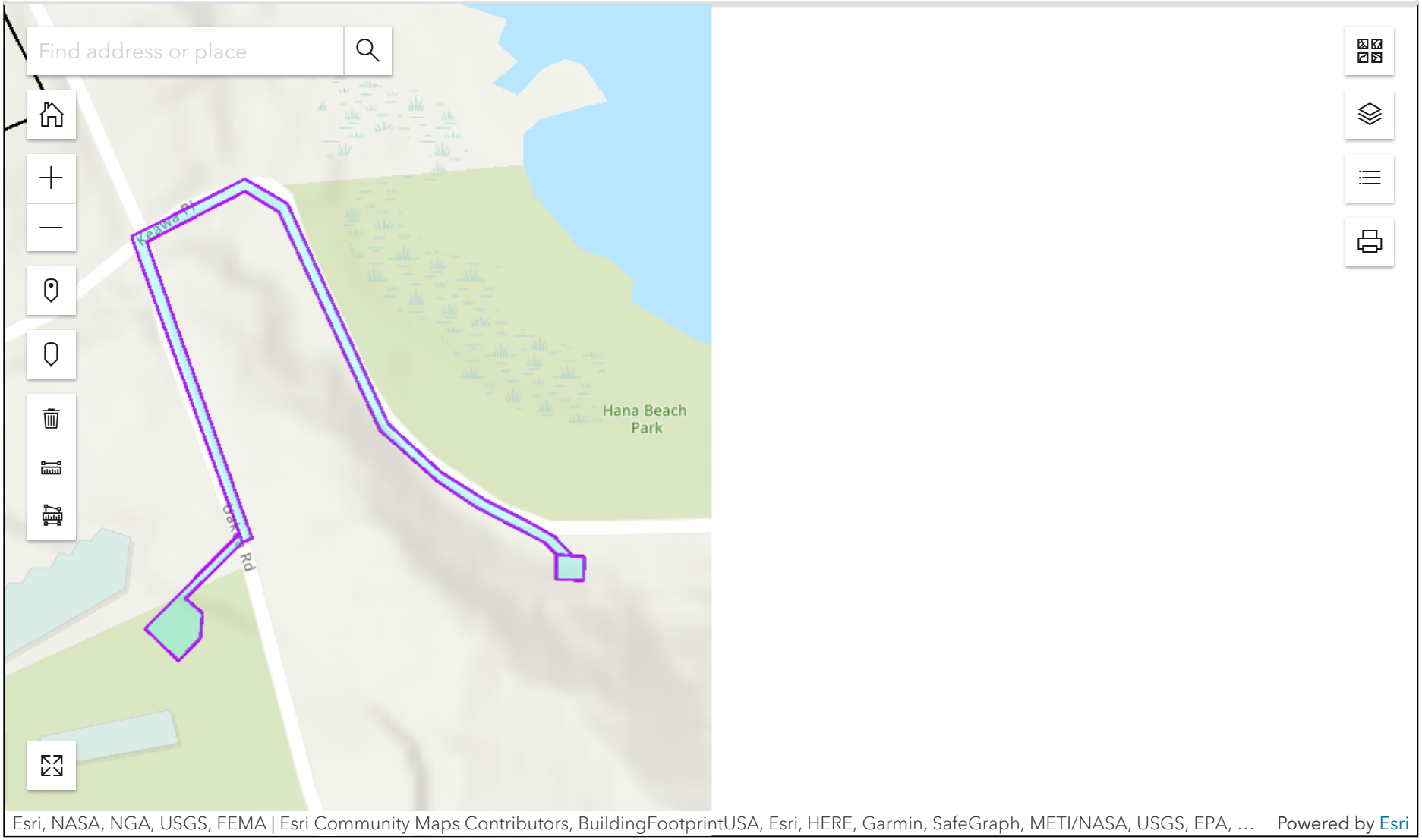
No data

**Determination 6E Comment**

No data

**Date Opinion 6E**

No data




## Project Review Location

**APE / 6E Project Area Location Description**

Combined Total Project Site Area: 0.115 acres (or 5000 SF) The project area includes 1) Helene Hall (TMK 1-4-04: 34): a community building across from Hana Beach Park. This building provides restrooms and community meeting areas. (0.025 acres or 1000 SF) 2) Hana Ball Park parking lot (TMK: 1-4-04: 29): this property is an empty lot (paved driveway and grass) with restrooms along the south side of the lot. It is used as a parking lot for Hana Ball Park. (0.09 acres or 4000 SF) A 1.5" sewer force main will be installed, connecting these sites, along Keawa Place (Hawaii State highway) and Uakea Road (Maui County road). Trenching would be 10 feet wide for the length of the 1200 LF of piping, adding an additional 12,000 SF, or 0.275 acres. Total Disturbed Area: 0.39 acres (or 17,000 SF)

**APE / 6E Project Area**

0.39 Acres

## Project Review Address

**Project Address**

Helene Hall, 174 Keawa Place

**Project City**

Hana

**Project ZIP**

96713

# Project Agencies

| Agency | Type | Program/Permit Name | Project/Permit/Tracki... | Primary |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **County of Maui, Depart...** | **Local** | **Grading Permit** | **WTP T2021/0025** | **Yes** |

Agencies: 1

# Project Statutes

| Statute | Description |
|---|---|
| HRS 6E-8 | Government agency projects |

Statutes: 1

# Project Fees

| Applicable Fee | Amount | Status |
|---|---|---|
| No records have been added. | | |

Fees: 0

# Submissions

VIEW

| Go To | Clock | Type | Status | Submission | Submitted By |
|---|---|---|---|---|---|
| | Closed | Initial | Closed | 2021PR00639.001 | |

Submissions: 1

# Project Geography

| Tax Map Key | Current |
|---|---|
| (2) 1 - 4 - 004 : 034 | Yes |
| (2) 1 - 4 - 004 : 029 | Yes |
| (2) 1 - 4 - 004 : 999 | Yes |

TMKs: 3

| Quadrangle | Current |
|---|---|
| Hana | Yes |

Quadrangles: 1

| Mokupuni | Moku | Ahupuaa |
|---|---|---|
| Maui | Hāna | Kawaipapa |

Ahupuaa: 1

| County | Census Designated Place |
|---|---|
| Maui | Hana |

CDPs: 1

# Project Contacts

VIEW

| Email | First Name | Last Name | Title | Organization | Phone | Primary ↑ |
|---|---|---|---|---|---|---|
| **karitarnstrom@...** | **Kari** | **Tarnstrom** | **Project Engineer** | **Kennedy Jenks ...** | **(808) 460-8552** | **Yes** |
| dsa.engineering... | Lance | Nakamura | Assistant Admin... | Development S... | (808) 270-7379 | No |
| seanklein@kenn... | Sean | Klein | Project Manager | Kennedy Jenks ... | (808) 218-6059 | No |

Contacts: 4

# Project Photos

VIEW

| Image | Name | Date | File Name or U... | Submission Nu... | Date Created |
|---|---|---|---|---|---|
| | Hana Ball Park - Fi... | 10/29/19 | 2021-06-08T11-19-... | | 06/08/2021 |
| | Hana Ball Park - G... | 10/29/19 | 2021-06-08T11-21-... | | 06/08/2021 |

| | | | |
|---|---|---|---|
| | Hana Ball Park - R... | 10/29/19 | 2021-06-08T11-23... | 06/08/2021 |
| | Helene Hall - ATUs | 10/29/19 | 2021-06-08T11-26... | 06/08/2021 |
| | Helene Hall - Man... | 10/29/19 | 2021-06-08T11-28... | 06/08/2021 |
| | Helene Hall - Site | 10/29/19 | 2021-06-08T11-30... | 06/08/2021 |

| | | | |
|---|---|---|---|
| Helene Hall - Stre... | 10/29/19 | 2021-06-08T11-32... | 06/08/2021 |

Photos: 7

# Project Documents

VIEW

| Attachment Name | File Name or URL | Submission Number | Date Created |
|---|---|---|---|
| Helene Hall Septic System Improvements - Final Plans | 2021-06-08T13-27-49_1967003.... | 2021PR00639.001 | 06/08/2021 |
| DSA Letter for DLNR | 2021-06-08T13-35-52_Helene Ha... | 2021PR00639.001 | 06/08/2021 |
| Minor Grading Permit Application | 2021-06-08T13-37-50_GradingP... | 2021PR00639.001 | 06/08/2021 |
| Helene Hall Septic System | 2021-06-08T13-43-00_Helene_H... | 2021PR00639.001 | 06/08/2021 |

| | | |
|---|---|---|
| Improvements - Project Description | | |
| 2-1-4-004_2021PR00639_2107AM07_ | 2021-07-15T10-28-48_2-1-4-004... | 07/15/2021 |

Attachments: 5

## Project Inquiries

| Request Item | Request | Response |
|---|---|---|
| No records have been added. | | |

Inquiries: 0

## Project Agreements

| GoTo | Name | Type |
|---|---|---|
| No records have been added. | | |

Agreements: 0

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT SERVICES ADMINISTRATION
250 SOUTH HIGH STREET
WAILUKU, HAWAII 96793
Ph: (808)270-7242 Inspector: (808)270-7366
dsa.engineering@mauicounty.gov

# GRADING AND GRUBBING PERMIT APPLICATION

## PROJECT/PROPERTY INFORMATION

| | | | |
|---|---|---|---|
| PROJECT NAME | Helene Hall Septic System Improvements | | |
| TAX MAP KEY | 1-4-04: 34 | ADDRESS | 174 Keawa Place, Hana, HI 96713 |

## OWNER / PERMITTEE INFORMATION

***DECLARATION:*** *The undersigned accepts the permit subject to conditions described in the General Provisions, construction plans, County Code Section 20.08, and any other document associated with the permit.*

| | | | |
|---|---|---|---|
| OWNER NAME | County of Maui, Environmental Services, Wastewater Reclamation Division (WWRD) | | |
| ADDRESS | 2200 Main Street, Suite 100, Wailuku, HI 96793 | | |
| PHONE | 808-270-8230 | EMAIL | Juan.Rivera@co.maui.hi.us |
| SIGNATURE | | PRINT NAME | Juan Rivera, P.E. |
| *If Permittee different from owner:* | | | |
| PERMITTEE NAME | Sean Klein, P.E., Kennedy Jenks Consultants | | |
| ADDRESS | 2145 Wells Street, Suite 406, PO Box 253, Wailuku, HI 96793 | | |
| PHONE | 808-218-6059 | EMAIL | seanklein@kennedyjenks.com |
| SIGNATURE | | PRINT NAME | Sean Klein |

## PERMIT INFORMATION

| | | | |
|---|---|---|---|
| ☑ GRADING PERMIT | Fill: | 400 | (cubic yards) |
| | Excavate: | 400 | (cubic yards) |
| | Graded Area: | 5000 | ( ☐ acres ☐ sq. ft.) |
| | Maximum height/depth of excavation or fill: | 10 | (feet) |
| ☐ GRUBBING PERMIT | Grubbed Area: | | ( ☐ acres ☐ sq. ft.) |

IDENTIFY CRITICAL AREAS LOCATED ON OR AFFECTING THE PROPERTY

- ☐ Yes ☐ No Is any portion of the property located in the Special Management Area?
- ☐ Yes ☐ No Are there Special Flood Hazard Areas or drainageways on the property?
- ☐ Yes ☐ No Is the property located along the shoreline?
- ☐ Yes ☐ No Are there wetlands located on the property?
- ☐ Yes ☐ No Are there known burials, cemeteries, or other historic sites on the property?
- ☐ Yes ☐ No Will grading affect an existing slope with a height greater than 15 feet and with a grade steeper than 35% (10H:3.5V)?

| | | | | |
|---|---|---|---|---|
| Estimated Dates: | Start: | July 2022 | Completion: | October 2022 |

**PERMIT APPROVAL** *(For county use only)* **APPLICATION NUMBER:**

Fee $ Bond

☐ **MS4 AREA** ☐ **Form B**
☐ **NPDES PERMIT** ☐ **SWPPP**

SPECIAL CONDITIONS

**APPROVED BY:** **PERMIT NUMBER:**

**For: Department of Public Works** **DATE OF ISSUANCE:**

**GENERAL PROVISIONS** are considered a part of this permit and are included herein by reference. Hard copy is available at Development Services Administration or can be viewed/downloaded online at County website: www.mauicounty.gov

# Project Description:

## Helene Hall Septic System Improvements

The County of Maui (County), Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall, in Hāna, Maui. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This causes the wastewater to back-up into the ATU system and requires staff to frequently (at least weekly) pump down the ATUs and cesspools. Due to these treatment and disposal deficiencies, the County, Wastewater Reclamation Division (WWRD) is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.

One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1-1/2” in diameter and buried within the existing roadway before reaching the Hāna Ball Park parking lot and the new treatment and disposal systems. The existing cesspools will be abandoned and closed.

The improvements are anticipated to improve system operability, reliability, and treated water quality. The proposed treatment train provides aerobic pretreatment, which will provide better $BOD_5$ removal and reduce the size of the new treatment unit at the ball park. This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups.
2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs.
3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ball Park parking lot.
4. Construct an offsite traffic rated absorption field at Hāna Ball Park parking lot for effluent disposal.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# ARCHAEOLOGICAL LITERATURE REVIEW AND FIELD INSPECTION

# APPENDIX C-1

# Archaeological Literature Review and Field Inspection for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupuaʻa, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way

**Prepared for**
**Munekiyo Hiraga**
**and**
**County of Maui Environmental Management Wastewater Reclamation Division**

**Prepared by**
**Josephine M. Yucha, M.S.,**
**Jay Rapoza, B.A.,**
**and**
**Hallett Hammatt Ph.D.**

**Cultural Surveys Hawaiʻi, Inc.**
**Wailuku, Hawaiʻi**
**(Job Code: KAWAIPAPA 6)**

**August 2022**

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**Wailuku, Hawaiʻi 96793**
**Ph.: (808) 242-9882**
**Fax: (808) 244-1994**

# Management Summary

| | |
|---|---|
| **Reference** | Archeological Literature Review and Field Inspection for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupua‘a, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way (Yucha et al. 2022) |
| **Date** | August 2022 |
| **Project Numbers** | Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: KAWAIPAPA 6; County Project No.: WW 19-15 |
| **Investigation Permit Number** | CSH completed the fieldwork component of this study under archaeological fieldwork permit numbers 20-07 (for 2020) and 22-02 (for 2022), issued by the Hawai‘i State Historic Preservation Division (SHPD) per Hawai‘i Administrative Rules (HAR) §13-13-282. |
| **Agencies** | County of Maui Department of Parks and Recreation, Department of Environmental Management Wastewater Reclamation Division (WWRD); SHPD |
| **Land Jurisdiction** | County of Maui |
| **Project Proponent** | County of Maui, WWRD |
| **Project Funding** | County of Maui, WWRD |
| **Project Location** | Helene Hall is a community complex located at 150 Keawa Place in Hāna in East Maui (TMK: [2] 1-4-004:034), directly across from the Hāna Bay Beach Park. The project area stretches from Helene Hall and aligned along the Keawa Place and Uakea Road Rights-of-Way (ROWs) to the Hāna Ballpark parking lot (TMK: [2] 1-4-004:029) at 5091 Uakea Road, approximately 457 m (about 1500 ft) long. The project area is bounded by the Hāna Bay to the northwest and Pu‘u Ku Islet Seabird Sanctuary and Kauiki Head to the east, and Hāna-Maui Resort to the west. Residences, churches, and various amenities are also to the north and south of the project area. The project area is depicted on a portion of the 1992 Hana U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. |
| **Project Description** | The County of Maui Department of Parks and Recreation owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This condition causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the County |

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| | WWRD is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.<br><br>One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed as a wastewater pump station. The wastewater will be pumped uphill along the roadway from Helene Hall to a new treatment system and absorption field located at the Hāna Ballpark parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 ft long and aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1.5 inches in diameter and buried within the existing roadway before reaching the Hāna Ballpark parking lot and the new treatment system and absorption field. The existing cesspools will be abandoned and closed.<br><br>The improvements are anticipated to improve system operability, reliability, and treated water quality. The proposed treatment train provides aerobic pretreatment, which will provide better BOD5 removal and reduce the size of the new treatment unit at the baseball park. This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:<br><br>1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups.<br>2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs.<br>3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ballpark parking lot.<br>4. Construct an offsite traffic rated absorption field at Hāna Ballpark parking lot for effluent disposal. |
| **Project Acreage** | The project area is 0.8 acres (0.32 hectares). |
| **Historic Preservation Regulatory Context and Document Purpose** | On 22 June 2020, the SHPD provided a Chapter 6E-42 historic preservation review of Grading Permit Application G T2020-0059 and Work to Perform Application WTP T2020-0010 for geotechnical borings along Uakea Road associated with the current project (Lot No.: 2020.00706; Doc. No.: 2006LS31). The SHPD requested archaeological monitoring for identification purposes be conducted under the provisions of the Fredericksen (2015) archaeological monitoring plan (AMP), which had been prepared for previous improvements to the Hana Ball Park Restroom Septic System Improvements Project. On 14 and 15 December 2020, CSH archaeologist, Layne Krause, M.A., conducted archaeological monitoring of the geotechnical excavations. No historic properties or cultural material were observed during this work and a summary of |

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| | the negative results have been included in this LRFI to support SHPD review of the project.<br>On 8 June 2021, CSH assisted the County of Maui in the submission of an initial Chapter 6E-8 SHPD project review via HICRIS 2021PR00639 for County of Maui Permit WTP T2021/0025 for the Helene Hall Septic System Improvements Project.<br>On 12 July 2021, the SHPD responded to the initial Chapter 6E-8 submittal with a review letter requesting an archaeological inventory survey (AIS) with a subsurface testing component for the proposed project (HICRIS 2021PR00639; Doc. No.: 2107AM07).<br>In consultation with the SHPD, the County of Maui instead proposed the preparation of this archaeological literature review and field inspection (LRFI) report. This investigation was designed—through detailed historical, cultural, and archaeological background research, archaeological observation of geotechnical borings, a GPR survey of selected portions of the project area, and a field inspection of the project area—to determine the likelihood that historic properties may be affected by the project, and based on findings, consider cultural resource management recommendations. This document is intended to facilitate the project’s planning and support the project’s historic preservation and environmental review compliance. This investigation does not fulfill the requirements of an AIS investigation, per HAR §13-13-276. |
| **Fieldwork Effort** | A field inspection and ground penetrating radar (GPR) survey were accomplished on 29 June 2022 by CSH archaeologists Noelani Hessler, B.A., Joshua Larosa, M.A., and Jay Rapoza, B.A., under the general supervision of Josephine Yucha, M.S., and Hallett H. Hammatt Ph.D., principal investigators. This work required approximately three person-days to complete.<br>The current project also included archaeological observation of test bore sampling that was conducted on 14 and 15 December 2020 by Hirata and Associates, Inc. Geotechnical work was observed by CSH archaeologist Layne Krause, M.A., under the general supervision of Principal Investigator Hallett Hammatt, Ph.D. This work required approximately two person-days to complete. |
| **Results Summary** | Fieldwork conducted as part of this LRFI included archaeological observation of minimally invasive geotechnical testing in 2020 as well as a pedestrian inspection of the project area and a non-invasive GPR survey of representative portions of the project area in 2022.<br>Observation of the geotechnical boring provided documentation of the general types and variation of stratigraphy within the project area, which includes alluvial loams, silts, and clays, basalt bedrock, and marine sand deposits. |

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| | No historic properties were identified within the project area during the field inspection, however, CSH observed retaining walls along portions of Uakea Road and Keawa Place that are likely more than 50 years old and outside of the project area. CSH also observed a mortared basalt and formed concrete drainage channel along the southern edge of Keawa Place that appears to be less than 50 years old based on construction style.<br>A GPR survey of three locations within or near the project area identified one linear anomaly within Grid # 2 at 1.0 m below surface that may also be associated with an overlying backfilled excavation. |
| **Recommendations** | The County of Maui requests SHPD reconsideration of the request for an AIS and instead proposes that the project proceed with archaeological monitoring for identification purposes under the provisions of a project-specific AMP. Consultation with the SHPD is recommended to determine appropriate historic preservation requirements for this project. |

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# Section 1 Introduction

## 1.1 Project Background

At the request of Munekiyo Hiraga and on behalf of the County of Maui Environmental Management Wastewater Reclamation Division (WWRD), Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this archaeological literature review and field inspection (LRFI) report for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupua‘a, Hāna District**,** Maui, TMK**s**: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way (ROWs). Helene Hall is a community complex located at 150 Keawa Place in Hāna in East Maui (TMK: [2] 1-4-004:034), directly across from the Hāna Bay Beach Park. The project area stretches from Helene Hall and aligned along the Keawa Place and Uakea Road ROWs to the Hāna Ballpark (TMK: [2] 1-4-004:029) at 5091 Uakea Road, approximately 457 m (about 1500 ft) long. The project area is bounded by the Hāna Bay to the northwest and the Hana Community Complex (Hāna School), Pu‘u Ki‘i Islet Seabird Sanctuary, and Kauiki Head at the east, and Hāna-Maui Resort to the west and north. Residences, churches, and various amenities are also to the north and south of the project area. The project area is depicted on a portion of the 1992 Hana U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), a tax map plat (Figure 2), and a 2015 aerial image (Figure 3).

The County of Maui (County) Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have the capacity to discharge the daily flows. This causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the WWRD is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.

One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed into a wastewater pump station. The wastewater will then be pumped uphill along the roadway from Helene Hall to a new treatment system and absorption field located at the Hāna Ballpark parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 ft (457.2 m) long and aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1-1/2” in diameter and buried within the existing roadway before reaching the Hāna Ballpark parking lot and the new treatment system and absorption field. The existing cesspools will be abandoned and closed.

The improvements are anticipated to improve system operability, reliability, and the quality of treated water. The proposed treatment train provides aerobic pretreatment, which will provide better BOD5 (five-day biochemical oxygen demand) removal and reduce the size of the new treatment unit at the baseball park. This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:

Figure 1. Portion of the 1992 Hana USGS 7.5-minute topographic quadrangle showing the location of the project area (U.S. Geological Survey 1992)

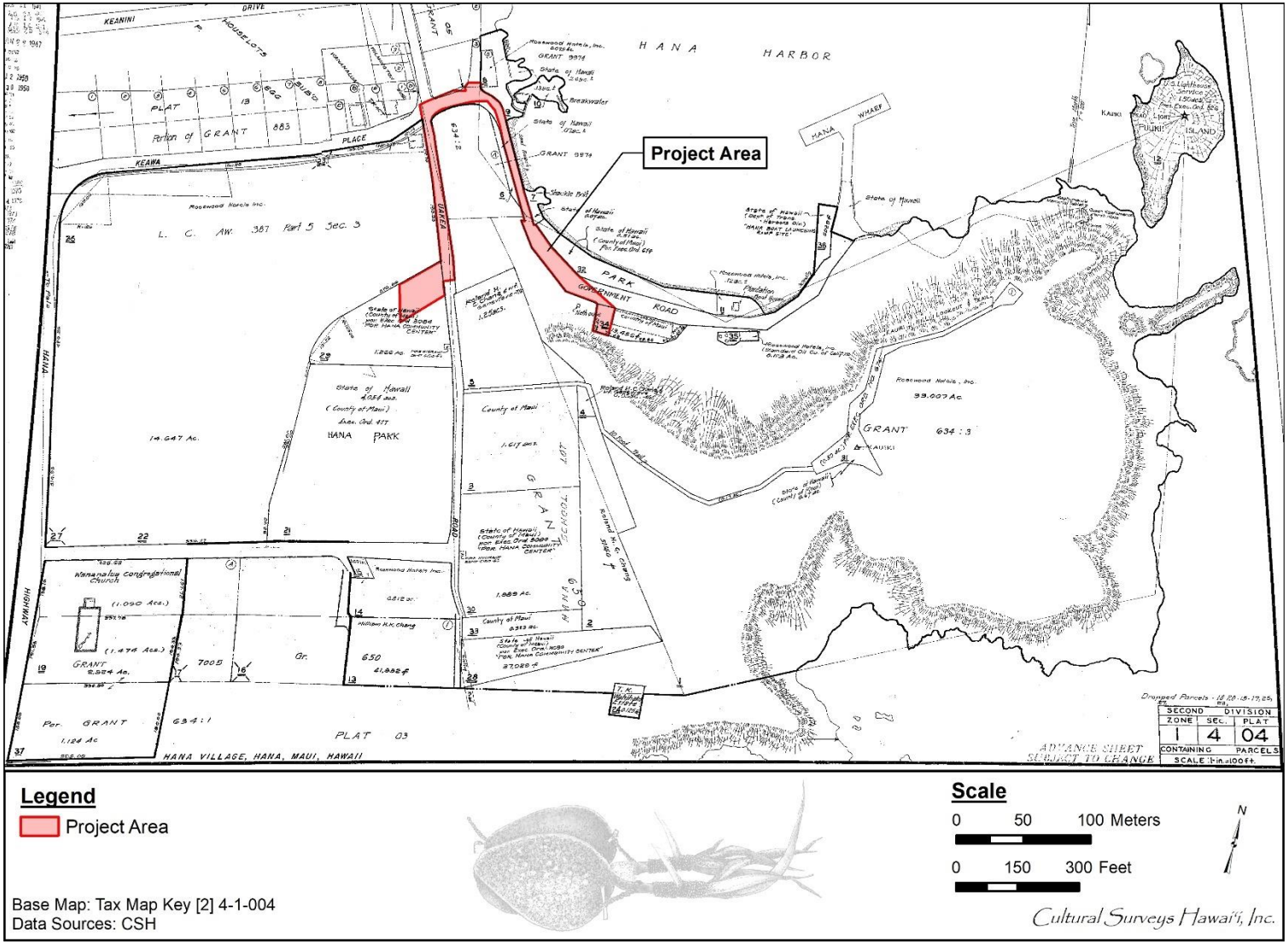


Figure 2. Tax Map Key (TMK) [2] 1-4-004 showing the project area (Hawaii TMK Service 2014)

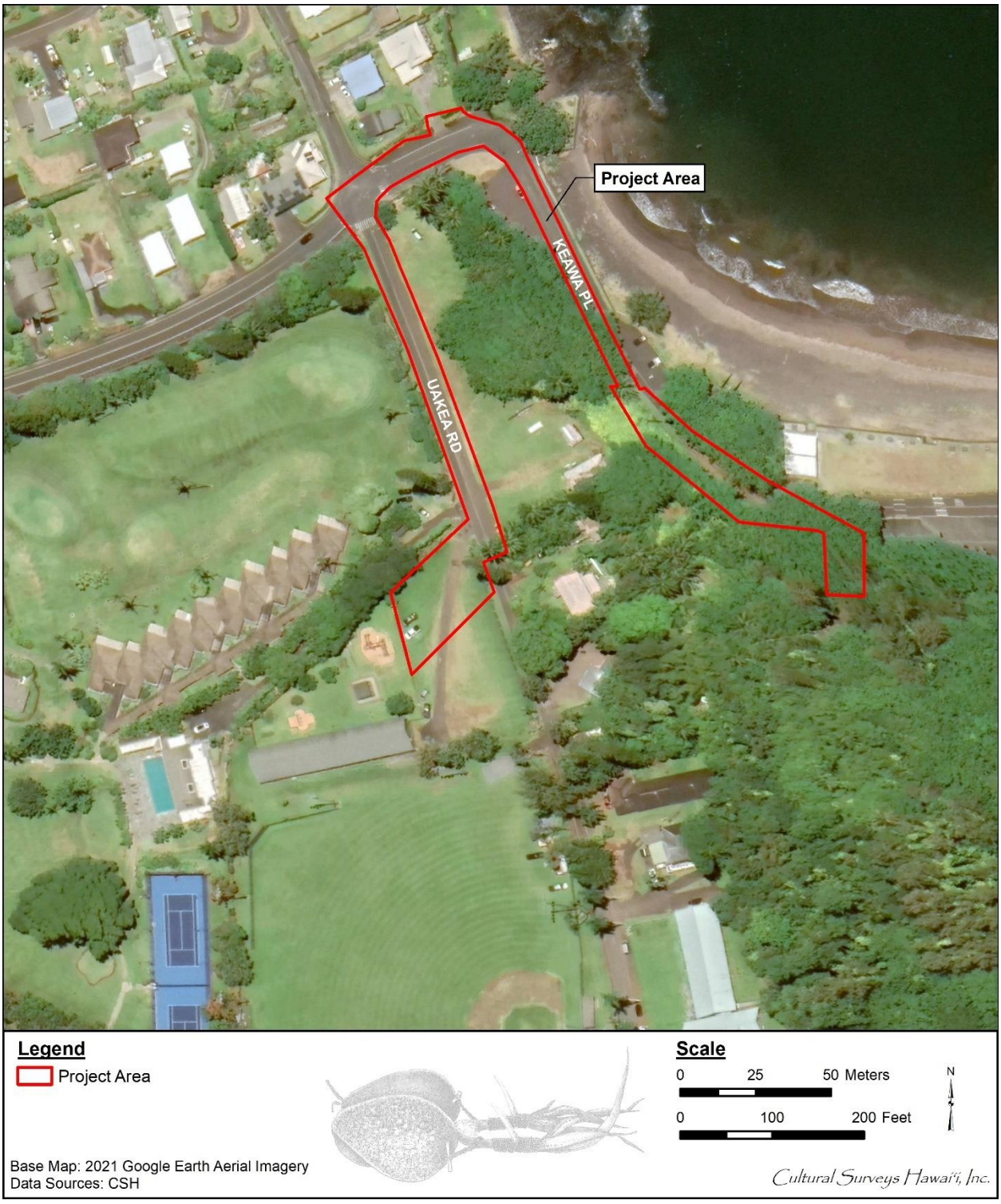


Figure 3. 2015 aerial image of the project area (Google Earth 2015)

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups,
2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs,
3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ballpark parking lot, and
4. Construct an offsite traffic rated absoprtion field at Hāna Ballpark parking lot for effluent disposal.

## 1.2 Historic Preservation Regulatory Context and Document Purpose

On 22 June 2020, the SHPD provided a Chapter 6E-42 historic preservation review of Grading Permit Application G T2020-0059 and Work to Perform Application WTP T2020-0010 for geotechnical borings along Uakea Road associated with the current project (Lot No.: 2020.00706; Doc. No.: 2006LS31; Appendix A). The SHPD requested archaeological monitoring for identification purposes be conducted under the provisions of the Fredericksen (2015) archaeological monitoring plan, which had been prepared for previous improvements to the Hana Ball Park Restroom Septic System Improvements Project. On 14 and 15 December 2020, CSH archaeologist, Layne Krause, M.A., conducted archaeological monitoring of the geotechnical excavations. No historic properties or cultural material were observed during this work and a summary of the negative results have been included in this LRFI to support SHPD review of the project.

On 8 June 2021, CSH assisted the County of Maui in the submission of an initial Chapter 6E-8 SHPD project review via HICRIS 2021PR00639 for County of Maui Permit WTP T2021/0025 for the Helene Hall Septic System Improvements Project.

On 12 July 2021, the SHPD responded to the initial Chapter 6E-8 submittal with a review letter requesting an archaeological inventory survey (AIS) with a subsurface testing component for the proposed project (HICRIS 2021PR00639; Doc. No.: 2107AM07; Appendix A).

In consultation with the SHPD, the County of Maui instead proposed the preparation of this archaeological literature review and field inspection (LRFI) report. This investigation was designed—through detailed historical, cultural, and archaeological background research, archaeological observation of geotechnical borings, a GPR survey of selected portions of the project area, and a field inspection of the project area—to determine the likelihood that historic properties may be affected by the project, and based on findings, consider cultural resource management recommendations. This document is intended to facilitate the project’s planning and support the project’s historic preservation and environmental review compliance. This investigation does not fulfill the requirements of an AIS investigation, per HAR §13-13-276.

## 1.3 Environmental Setting

### 1.3.1 Natural Environment

The project area is directly adjacent to Hāna Bay Beach Park, located on the northern flank of Haleakala along the eastern coast of Maui in Kawaipapa Ahupua‘a. The location is approximately 15 to 32 m (approximately 49.21 to 104.98 ft) above mean sea level (AMSL). Along Uakea Road,

a variety of trees and some shrubs line the sides of most of the project area, along with manicured lawns. Natural vegetation covers the hillside behind Helene Hall and around the beach park. Plants and trees identified along the project area include ironwood (*Casuarina equisetifolia*), *hau* (*Hibiscus tiliaceus*), coconut palm (*Cocos nucifera*), false *kamani* (*Terminalia catappa*), Cook pine (*Araucaria columnaris*), *laua‘e* (*Phymatosorus grossus*), red *ti* (*Cordyline fruticosa*), and *naupaka* (*Scaevola taccada*).

In 2014, the average annual air temperature for the project area was between 21.24°C (70.23°F) in February and 24.83°C (76.69°F) in August with an average annual air temperature of 23.09°C (73.56°F) (Giambelluca et al. 2014). The vicinity of the project area received a mean annual rainfall of 1611.4 mm (63.44 inches) between 1978 and 2007, according to the University of Hawai‘i 2011 *Rainfall Atlas of Hawaii* (Giambelluca et al. 2013). The mean monthly rainfall varied between 109.8 mm (4.32 inches) in July to 187.7 mm (7.38 inches) in January.

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972) (Figure 4). The project area consists entirely of Hana silty clay loam, moderately deep variant, 3 to 15 percent slopes (HKNC).

Hana Series soils are described as follows:

> This series consists of well-drained soils on uplands on the island of Maui. These soils developed in volcanic ash. They are gently sloping to moderately steep. Elevations range from nearly sea level to 1,200 feet. Hana soils are geographically associated with Honomanu and Malama soils...
>
> These soils are used for pasture and homesites. The natural vegetation consists of californiagrass, guava, kaimiclover, koa, and sodges...
>
> This soil is nonstony and moderately deep. Its surface layer is dark-brown silty clay loam that contains 10 to 15 percent gravel and cobblestones. The subsoil, 6 to 14 inches thick, is reddish-brown, very friable silty clay loam that has weak, subangular blocky structure. It contains 20 to 30 percent gravel and cobblestones. The substratum is fragmental Aa lava at the depth of 20 to 30 inches.
>
> Run off is slow to medium and the erosion hazard is slight to moderate. In places roots penetrates to a depth of 2 to 3 feet. Included in mapping were small, moderately steep and steep areas near cinder cones. Also included were a few rock outcrops.
>
> This soil is used for pasture and homesites (Capability classification IIIe, nonirrigated; pasture group 11; wood-land group 8). (Foote et al. 1972:37)

### 1.3.2 Built Environment

The project area is along portions of two rural, two-lane ROWs, Uakea Road to the west and Keawa Place along Hāna Bay Beach Park. The Kamehameha Hāna Preschool borders the northern side of the ballpark and includes an elongated single-story building and play areas. The Hana School building is along the eastern side of Uakea Road, and it is now the Hāna Community Center and District Complex and Ballpark. The project area is east of the Hāna-Maui Resort, which features 75 rooms, suites, and family residences, which also are situated south of the project area.

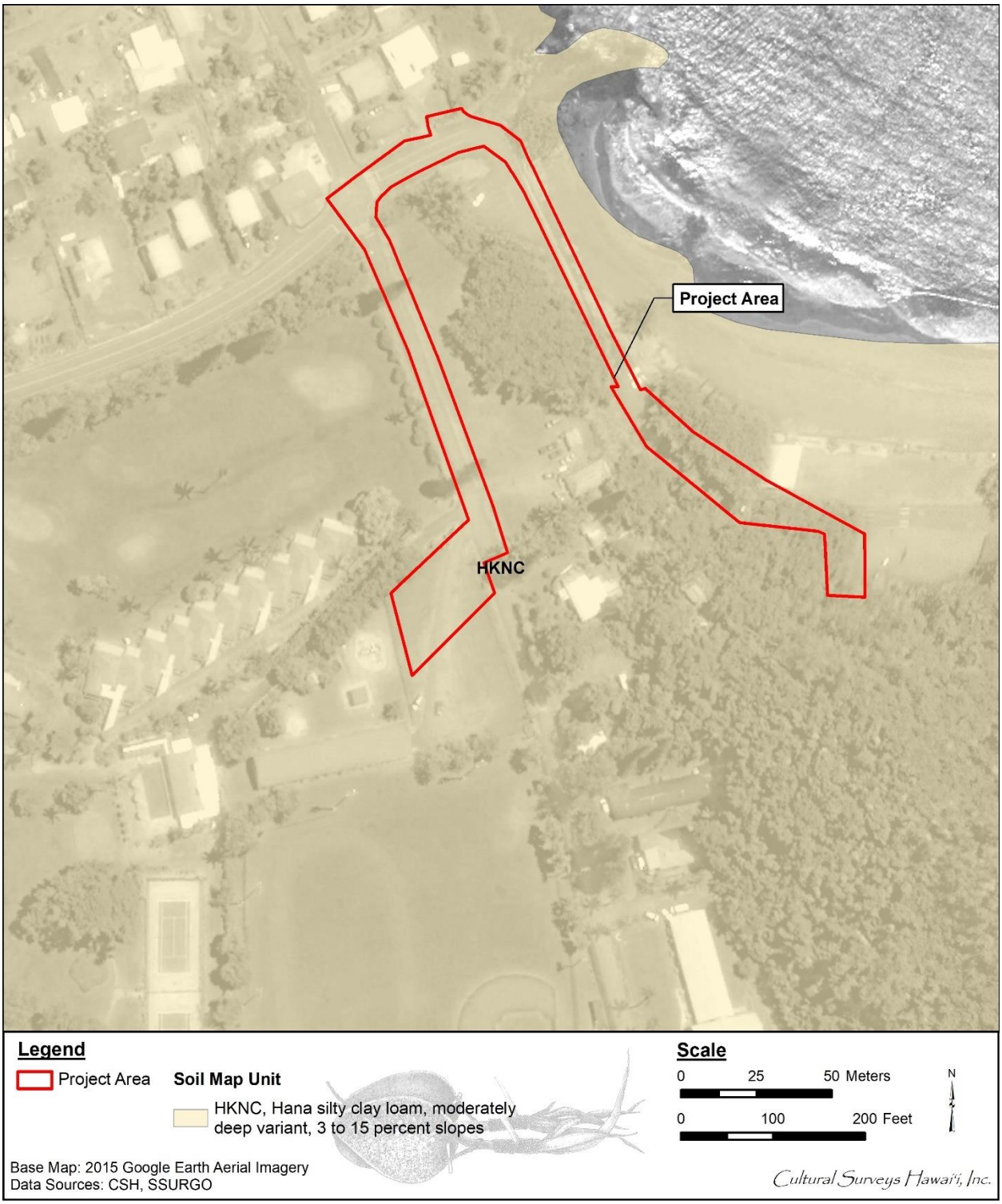


Figure 4. Overlay of *Soil Survey of the State of Hawaii* (Foote et al. 1972), indicating soil types within and surrounding the study area (U.S. Department of Agriculture 2001)\

# Section 2 Methods

## 2.1 Field Methods

CSH completed the fieldwork component of this study under archaeological permit # 22-02, issued by the SHPD pursuant to HAR §13-13-282. Fieldwork was conducted on 29 June 2022 by CSH archaeologists Noelani Hessler, B.A., Joshua Larosa, M.A., and Jay Rapoza, B.A., under the general supervision of Principal Investigators, Hallett H. Hammatt Ph.D. and Josephine M. Yucha, M.S. This work required approximately three person-days to complete. In general, fieldwork included 100% pedestrian inspection of the project area, photographic recordation, written documentation, and a ground penetrating radar (GPR) survey.

### 2.1.1 Geotechnical Boring

On 14 and 15 December 2020, CSH observed geotechnical boring operations conducted at eight locations by Hirata and Associates, Inc. Test Bore 3 through Test Bore 8 were within the current project area (Figure 16). Geotechnical work was observed by CSH archaeologist Layne Krause, M.A., under the general supervision of Hallett Hammatt, Ph.D. this work required approximately two person-days to complete.

Each bore hole was drilled to a targeted depth between 1 to 3 m (3.3 to 9.8 ft). The bore holes were approximately 7.0 cm in diameter. The bore holes were completed with a truck-mounted direct-push drilling probe. The archaeologist watched as the machine drilled each bore hole and inspected the backdirt and sediment as Hirata and Associates personnel removed column samples at several intervals for collection. The sediment samples typically originated from depth intervals of 0.3 to 0.7 m (1.0 to 2.5 ft), 0.9 m (3.0 ft), 1.5 m (5.0 ft), and 2.7 m (9.0 ft). Each column sample was photographed.

Stratigraphic profiles were not recorded due to the small size of the bore hole, such that the underlying stratigraphy was not visible to produce an accurate profile map. No samples were collected by the archaeologist. No cultural materials were observed during monitoring. Observation of the geotechnical boring provided documentation of the general types and variation of stratigraphy within the project area, which includes a mix of aeolian sand, lithified sand, and alluvial loams.

### 2.1.2 Pedestrian Survey

A 100%-coverage pedestrian inspection of the project area was undertaken for the purpose of historic property identification and documentation. The pedestrian survey was accomplished through systematic sweeps spaced approximately 5.0 m apart. All points of interest were recorded using a Trimble Geo XH mapping grade GPS unit with real-time differential correction yielding post-processed horizontal accuracy between 0.3 and 0.5 m.

### 2.1.3 GPR Survey

Three GPR survey areas were placed in locations proposed for project-related ground disturbance and were distributed to provide representative coverage of the overall project area. The GPR grid sizes varied based on the overall topography and geographic features of the selected

areas. The survey grids were established using pin flags and marking paint to delineate the boundaries and each parallel transect.

Documentation included descriptions and photographs of the locations of each GPR survey area, including sediment types, vegetation types and densities, and the field methodology completed by the survey crew for each GPR grid location (starting points, ending points, direction of travel, and transect/grid boundary recording) (Table 1). Descriptions and photographs were recorded using Apple iPads equipped with standard digital form software and digital cameras.

The GPR survey was performed using a Geophysical Survey Systems, Inc. (GSSI) SIR-3000 system equipped with a 400 MHz antenna. This is a bistatic system in which electromagnetic energy in the radar frequency range is transmitted into the ground via a sending antenna. Radar energy is reflected off the subsurface matrix, then received by another, paired antenna. Reflected energy is sampled, and the travel time (in nanoseconds) of the individual reflection waves is recorded. Wave propagation speed varies depending on the nature of the subsurface medium. Any changes in density or electromagnetic properties within the stratigraphic column may cause observable variations in reflection intensity. Reflection features may include discrete objects, stratigraphic layering, or other natural and/or man-made subsurface anomalies.

The soil type for this area was determined to be “wet silt” and assigned GSSI Soil Type 2 with a dielectric constant of 10. The scans per unit was set at 50 scans per meter. The settings used for this survey were based on the recommendations of GSSI (GPR manufacturer) for this soil type. GPR data collection parameters were held constant throughout the survey under the assumption that soil characteristics were relatively consistent throughout the survey area (Table 2). The maximum depth of interest was set at 3.0 m.

The survey was completed using the GSSI Quick3D collection mode for 3D scans of each survey grid. The survey was completed in one direction (normal mode) from the X-axis traveling along the Y-axis. GPR transects were spaced every 25 cm.

Post-processing of the data was completed using GSSI RADAN 7 software to produce a 3D grid file or GPR profile slice for each location. Post-processing included an adjustment of the Time-Zero line to eliminate the GPR signal that is recorded between the base of the antenna and the ground surface as well as changes to the display gain. No other post-processing techniques were utilized.

Following the completion of each GPR survey area, the corners of each individual grid were recorded using a Trimble Geo XH mapping grade GPS unit with real-time differential correction yielding post-processed horizontal accuracy between 0.3 and 0.5 m. Following GPR post-processing and analysis, the location of each anomaly was georeferenced and re-uploaded to the Trimble Geo XH mapping grade GPS unit so that the anomaly could be located during ground-truthing excavation.

Table 1. Individual GPR grid/transect information

| GPR Survey Area | Grid # | X-axis (m) | Y-axis (m) | Transect Spacing (m) | Origin (0.0) | Direction of Travel |
|---|---|---|---|---|---|---|
| 1 | 1 | 3.5 | 7.0 | 0.25 | NW | SE |
| 2 | 2 | 6.5 | 18.0 | 0.25 | SW | NE |
| 3 | 3 | 3.0 | 5.0 | 0.25 | SW | NE |

Table 2. GPR data collection parameters

| Parameter | Setting |
|---|---|
| Antenna | 400 MHz |
| Depth of Interest | 3.0 m |
| Soil Type | GSSI Soil Type 2 (wet silt) |
| Dielectric | 10 |
| Scans Per Unit | 50 (per meter) |

## 2.2 **Research Methods**

Background research included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai‘i, the Hawai‘i State Archives, the Mission Houses Museum Library, the Hawai‘i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai‘i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona ‘Aina (2000) database.

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected types and locations of historic properties in the project area.

# Section 3 Background Research

## 3.1 Traditional and Historical Background

### 3.1.1 Mythological and Traditional Accounts

Hawaiian storytellers of old were greatly honored; they were a major source of entertainment and their stories contained lessons while interweaving elements of Hawaiian lifestyles, genealogy, history, relationships, arts, and the natural environment (Pukui and Green 1995:IX). According to Pukui and Green (1995), storytelling is better heard than read for much becomes lost in the transfer from the spoken to the written word and *ka‘ao* are often full of *kaona* or “double meanings.”

*Ka‘ao* are defined by Pukui and Elbert (1986:108) as a “legend, tale […], romance, [and/or], fiction.” *Ka‘ao* may be thought of as oral literature or legends, often fictional or mythic in origin, and have been “consciously composed to tickle the fancy rather than to inform the mind as to supposed events” (Beckwith 1970:1). Conversely, Pukui and Elbert (1986:254) define *mo‘olelo* as a “story, tale, myth, history, [and/or] tradition.” The *mo‘olelo* are generally traditional stories about the gods, historic figures or stories which cover historic events and locate the events with known places. *Mo‘olelo* are often intimately connected to a tangible place or space (*wahi pana*).

In differentiating *ka‘ao* and *mo‘olelo* it may be useful to think of *ka‘ao* as expressly delving into the *wao akua* (realm of the gods), discussing the exploits of *akua* (gods) in a primordial time. *Mo‘olelo* on the other hand, reference a host of characters from *ali‘i* (royalty) to *akua*; *kupua* (supernatural beings) to *maka‘āinana* (commoners); and discuss their varied and complex interactions within the *wao kānaka* (realm of man). Beckwith (1970:1) elaborates, “In reality, the distinction between *ka‘ao* as fiction and *mo‘olelo* as fact cannot be pressed too closely. It is rather in the intention than in the fact.” Thus, a so-called *mo‘olelo*, which may be enlivened by fantastic adventures of *kupua*, “nevertheless corresponds with the Hawaiian view of the relation between nature and man” (Beckwith 1970:1).

Both *ka‘ao* and *mo‘olelo* provide important insight into a specific geographical area, adding to a rich fabric of traditional knowledge. The preservation and passing on of these stories through oration remains a highly valued tradition. Additionally, oral traditions associated with the study area communicate the intrinsic value and meaning of a place, specifically its meaning to both *kama‘āina* (Native-born) as well as others who also value that place.

The following section presents traditional accounts of ancient Hawaiians living in the vicinity of the project area. Many relate an age of mythical characters whose epic adventures inadvertently lead to the Hawaiian race of *ali‘i* and *maka‘āinana*. The *ka‘ao* in and around the project area shared below are some of the oldest Hawaiian stories that have survived; they still speak to the characteristics and environment of the area and its people.

#### 3.1.1.1 ‘Ai‘ai, Son of Kū‘ula the God of Fishermen

Kū‘ula (god of fishermen), his wife Hinapukui‘a, his brother Ku‘ulauka (god of cultivators), and Hina‘ulu‘ōhi‘a (goddess of forest growth, sister of Hinapukui‘a, and wife of Ku‘ulauka) lived in and around Hāna. Kū‘ula served as head fisherman under Chief Kamohoali‘i. At the time of his death, Kū‘ula prepared for the future by instructing his son, ‘Ai‘ai, on establishing fishing stations in the islands, and how to attract fish. Kū‘ula gave ‘Ai‘ai his magic objects including: “a decoy

stick called Pahiakukahuoi (-kahuai), a cowry called Leho-ula, a hook called Manai-a-ka-lani, and a stone called Kū‘ula which, if dropped into a pool, had the power to draw the fish thither" (Beckwith 1970:19). ‘Ai‘ai traveled around Maui returning fish to the *ko‘a* (fishing ground or station) of the island by erecting *kū‘ula* (stone god used to attract fish) and by teaching local people the best fishing techniques (Beckwith 1970:20).

Another type of legend concerns the many fishing-related activities, such as fishpond building and fishhook and octopus lure making, which were taught to humans by Kū‘ula and his son ‘Ai‘ai. In one account Kū‘ula, a legendary resident of Hāna, builds Hawai‘i’s first fishpond at the base of Ka Iwi o Pele. However, a chief of Hāna becomes angry with Kū‘ula who escapes, along with his wife, to the sea where they turn into fish. It is left up to his son ‘Ai‘ai to travel the islands and teach humans his father’s techniques, as well as how to worship Kū‘ula. Fishing shrines, or *ko‘a* are found on all the islands. They contain *ku‘ula* stones, which are usually oblong water-rounded boulders. The *ko‘a ku‘ula* are stone altars or houses for rites to attract and cause fish to multiply and to ensure a good catch (Kawaharada 1999:6).

#### 3.1.1.2 Eleio and the Ghost of ‘O‘opuola

Eleio was the messenger of the king of Maui, called Kaka‘alaneo. He was known for his speed and was sent each morning to Hāna to bring *‘awa* back to the king who lived in Lāhainā. According to *mo‘olelo*, "As soon as the order was given, Eleio would run off with great speed, all the way from Lahaina to Hana. The distance between these two places is about forty miles. It is said in the legend that Eleio could beat the wind in speed" (Fornander 1919:434).

One day during Eleio’s journey from Lāhainā to Hāna, he was stopped by the ghost Ka‘ahuali‘i, who lived in the wilderness of ‘O‘opuola in East Makaīwa Ahupua‘a.

> In one of his trips to Hana, he met Kaahualii, a ghost, who lived in the wilderness of Oopuola. When the ghost met him, he asked that he be given some of the awa, but Eleio insulted him by telling him to take the hairs of his body and use it for his awa.
>
> When Kaahualii heard this, he gave chase, believing that he could catch Eleio; but he was unable to catch him who ran much faster.
>
> When Eleio came to Kakaalaneo, he saw that the meal, the awa for which he was sent, was being served. On his return from Hana Eleio while running was preparing the awa at the same time, so when he entered the house, he placed the awa in the cup, strained it and placed the cup to the mouth of Kakaalaneo. Kakaalaneo was thus enabled to drink his awa before he began on his meal.
>
> Because of this Eleio was noted for his great speed and the people of the present generation think the story to be true. (Fornander 1919:434)

#### 3.1.1.3 The Legend of the Great Eel

‘Ai‘ai followed in the footsteps of his father, using his knowledge and power and his magic objects to set up new fishing grounds around the islands. In his travels, he made a fishing ground in Hāna:

> The first fishing ground marked out by ‘Aiai is that of the Hole-of-the-Ulua where the great eel hid. A second lies between Hāmoa and Hanao‘o in Hāna, where fish are caught by letting down baskets into the sea. A third is Koa-uli in the deep sea. A fourth is the famous akule fishing ground at Wana-ula mentioned above. At Honomaele he places three pebbles and they form a ridge where aweoweo fish gather. At Waiohue he sets up on a rocky islet the stone Paka to attract fish. From the cliff of Puhi-ai he directs the luring of the great octopus from its hole off Wailua-nui by means of the magic cowry shell and the monster is still to be seen turned to stone with one arm missing, broken off in the struggle. Leaving Hāna, he establishes fishing stations and altars along the coast all around the island as far as Kipahulu… (Beckwith 1970:21-23)

#### 3.1.1.4 Legends of Pele in Hāna

Pu‘uhele, a sister of Pele, was said to have been brought to Hāna as a child, but was left behind because she continually bit the breast as she was being fed. The place where she stayed was Pu‘u Ka‘uiki. In another version, she is not born as human, but as a bloody fetus, which was thrown away by Pele and another of her sisters. Pu‘uhele landed at Nu‘u, and was turned into a beautiful woman who traveled to Wananalu, where she was killed for trespassing. The hill Ka‘uiki rises from the spot where she was buried (Cleghorn and Rogers 1987:6). Legendary references mostly concern geomorphologic features such as Pu‘u Ka‘uiki and the Pu‘u Ka Iwi o Pele. One legendary account concerning the creation of Pu‘u Ka‘uiki tells of a sister of the goddess Pele, Pu‘uhele (wandering hill), being left behind at Hāna, becoming Ka‘uiki Hill. In another legend, Pu‘uhele is killed and Ka‘uiki rises from the burial place (Fornander 1919:508).

Ka ‘Iwi o Pele (the bones of Pele), the hill or *pu‘u*, east of Hāna Highway also has a number of origin legends. One relates that Pele was driven from her original homeland by one of her sisters, Namakaokahai, for having a love affair with her brother-in-law. Pele is pursued by Namakaokahai and killed: her physical remains form the hill of Ka Iwi o Pele. Another legend relates that Pele, looking for a home, pauses at each of the Hawaiian Islands and, while at Haleakalā, creates various parts of Maui including Ka ‘Iwi o Pele and ‘Alau Island just off the coast (Fornander 1919:506).

#### 3.1.1.5 Heiau

*Heiau* are traditional places of worship. Construction of some *heiau* were elaborate and large communal structures, while others were simple earth terraces or shrines (McAllister 1933:8). *Heiau* are most known to be where important ceremony took place and are large structures with platforms or altars comprised of one or more terraces (McAllister 1933:8).

Kauleiula Heiau (Walker Site 109) was located approximately 50 yards east of a “Site” on Nānu‘alele Point. It is described as follows:

> A stone platform on a rise of ground 6 to 8 feet high. It measures 60 x 95 feet and there is an additional 30 feet of level hill-top which may have been included in the heiau. On the side below the hill is a large natural pond, one of several in that vicinity. A path of stepping-stones leads across this pond and up onto the hill, crossing one corner of the heiau. The heiau is built of chunks of lava and water-worn boulders. There is a low wall on one end and several terraced platforms... Two of these at least, are graves. A house enclosure 12 x 25 feet is set an angle with the

> heiau platforms and does not seem to conform to the general plan of the heiau. The interior of the heiau is lower than the sides, but many of the terrace edges have been broken and the stones removed for other purposes. (Walker 1931:184)

Kauleilepo-Kauleiula Heiau (Walker Site 110) was located on the point of rocks just north of Hāna Bay at Kainalimu. It is described as follows:

> A twin or double heiau consisting of two elevated open platforms connected by a causeway. The larger is toward the sea and measures 42 x 54 feet The causeway is 25 feet long, 8 feet high ad [*sic*] 4 feet wide. On the other end is the smaller platform 22 x 25 feet and slightly lower than the front one. The south side of the larger has been terraced to a height of 15 feet. Construction is of water-worn boulders with pieces of Aa lava and coral sprinkled over the top. Modern houses and sheds have been built on the front of the heiau thus destroying much of the surface of the platform. Thrum gives the double name to this heiau by my informant, N. Silva, said the Kauleiula Heiau was the nearby one Site which we at first thought was only a graveyard. (Walker 1931:185)

3.1.1.6 Ke Alaloa o Maui

Kiha-a-Pi‘ilani “is credited with finishing the paved road around the island (Ke Alaloa o Maui), which his father (Pi‘ilani) had begun” (Griffin et al. 1987:9). The paved roadway was utilized in Hāmākua Loa by a group of missionaries touring Maui in 1828.

> ...having descended from the summit of Haleakala, they came down to a small village on the Halehaku seashore. On the next day, proceeding toward Hana, they came upon ‘a pavement said to have been built by Kihapiilani, a king contemporary with Umi, an ancient king of Hawaii ... It extends more than 30 miles and is a work of considerable magnitude. This pavement afforded us no inconsiderable assistance in traveling as we ascended and descended a great number of steep and difficult paries (palis)’ ... (Kuykendall 1938:4)

In describing the building of Kiha-a-Pi‘ilani’s road Beckwith (1970:387) states, “men are said to have stood in line and passed stones from seashore to upland.” Once the road was paved however, residents of Hāmākua Loa most likely benefitted from having access to the road and to the people traveling through the district, particularly given its location between Wailuku and Hāna, two prominent political centers during the last two centuries of pre-Contact Hawaiian history.

The Alaloa also served as an instrument of transportation in wartime, which during the last half of the eighteenth century, was very frequent. During these times, the people of Hāmākua Loa and the surrounding districts (between Hāna and Wailuku) who were situated near the war path including canoe landings, the Alaloa and the cultivated and inhabited places in between were subject to plundering by warring chiefs. (Kamakau 1992:230) remarks on the impacts of war on the commoners, “wars were frequent in old days and entailed robbery and murder of the common people.” Between 1778 and 1779, Kalani‘ōpu‘u invaded Hāmākua Loa after purportedly being provoked by a resident.

> As he was sailing just off Kahakuloa, a certain man was sitting on the crest of Pu‘ukoa‘e, and as the war canoes came in sight the man made a gesture of contempt ... At Hamakualoa Ka-lani-‘opu‘u landed and engaged in battle, but Ka-hekili

> hastened to the aid of his men, and they put up such a fierce fight that Ka-Iani-‘opu‘u fled to his canoes. Landing at Ko‘olau he slew the common people and maltreated the captives by urinating into their eyes. (Kamakau 1992:91)

### 3.1.2 Early Historic Period

The division of Maui’s lands into political districts first occurred during the rule of Kaka‘alaneo under the direction of his *kahuna* named Kalaiha‘ōhi‘a (Beckwith 1970:383). The *moku o loko*, or *moku* as it is most called, literally means “to cut across, divide, separate” (Lucas 1995:77). When used as a term of traditional land tenure, a *moku* is similar to a political district that can contain smaller divisions of land such as *‘okana*, *kalana*, *ahupua‘a*, *‘ili*, and *mo‘o*.

The project site occupies a heavily storied traditional landscape *mauka* (from the mountain ridges) to *makai* (to the ocean reef) that was also rich in natural resources, masterfully engineered with agricultural/aquacultural systems and trail networks, densely populated, and favored and warred over by ruling *ali‘i* (elites) (Beckwith 1970:40; Handy and Handy 1972:206, 505).

Chief Pi‘ilani united all of Maui under his rule during the sixteenth or seventeenth century. Pi‘ilani’s sons, Lonopi‘ilani and Kiha-a-Pi‘ilani, fought for control of Maui. Kiha-a-Pi‘ilani eventually took refuge at Hāna. While in Hāna, Kiha-a-Pi‘ilani took as his wife Koleamoku, who had been betrothed to Lonopi‘ilani, which again put the two brothers to warring. Kiha-a-Pi‘ilani and his wife Koleamoku fled to Hawai‘i Island to enlist the aid of ‘Umi. ‘Umi was married to Pi‘ikea, the daughter of Pi‘ilani (sister of Lonopi‘ilani and Kiha-a-Pi‘ilani), a marriage that had formerly brought peace between the islands of Hawai‘i and Maui. However, ‘Umi sided with Kiha-a-Pi‘ilani and sent an invasion fleet to Hāna. In Hāna, at Ka‘uiki, Lonopi‘ilani’s forces, under the command of Ho‘olaemakua, withstood the Hawai‘i forces for a while until a nighttime raid overwhelmed them. With this battle, Kiha-a-Pi‘ilani gained control of Maui.

Maui chiefs ruled Hāna until its conquest in the mid-eighteenth century by Hawai‘i Island’s Chief Kalani‘ōpu‘u (Kamakau 1992:85−87). Decades of war between the island polities ensued, with Maui Chief Kahekili resuming rule of Hāna and all Maui until their conquest and incorporation into the United Kingdom of Hawai‘i by Kamehameha in 1790 (Ulukau 2021). During the last half of the 18th century the battles between Maui and Hawai‘i were carried on by the high chiefs Kahekili of Maui and Kalani‘ōpu‘u of Hawai‘i. Kalani‘ōpu‘u was in control of the Hāna and Kipahulu areas from ca. 1759 to 1765 when Kahekili won out. However, the Hawai‘i forces were able to regain control from ca. 1775 to 1783 (Kamakau 1992:83-84). In 1778, when Captain James Cook’s ships returned from their North American explorations, they stopped off Hāna but didn’t land (Beaglehole 1967:582-583). With the death of Kalani‘ōpu‘u in 1782, Kahekili regained control of Hāna, which he retained, though not without further battles with Hawai‘i Island forces (i.e., Kamehameha), until his death in 1794 (Kamakau 1992:88-91). With the death of Kahekili and the assistance of newly acquired foreign power (canons, muskets, men) Kamehameha gained control not only of Maui, but of all the Hawaiian Islands, except Kaua‘i, by 1795 (Kamaukau 1992:171). Hāna is also associated with the *ali‘i nui* (supreme elite) Ke‘eaumoku Papaiaheahe and his *‘ohana*. His daughter, born at Pu‘u Ka‘uiki in the late eighteenth century, became Queen Ka‘ahumanu, wife of Kamehameha I (Kapiikauinamoku in *The Honolulu Advertiser*).

#### 3.1.2.1 Battle at Pu‘u Koa‘e

Around 1790, Kamehameha and his forces landed on Maui at Hāna. After having invaded Hāna, Kamehameha’s forces traveled to Hāmākua Loa. Kalanikupule, ruling chief of Maui at the time, sent his warrior Kapakahili to resist the invasion.

> When Kalanikupule heard of the landing of Kamehameha at Hana, and that he was marching with his force through the Koolau district, he sent Kapakahili with the best troops he had through the Hamakua districts to meet and resist the progress of the invader. (Fornander 1969:236)

> The battle met at a small hill called “Bosun-bird Hill” (Pu‘ukoa‘e) situated on the makai side of Pu‘umaile at Hanawana in Hoalua, and Kapakahili was defeated. In the evening Kamehameha beached at Halehaku, went ashore, and built temporary shelters just where he stepped foot. The feather god Kuka‘ilimoku encouraged him to fight, for its feathers bristled and stood upright in the direction of Hinawaikoli‘i; Kamehameha therefore lost his fear of a fight with slingshot. The next morning, he saw through the koa and hala trees the red gleam of feather capes. It is said that he narrowly escaped defeat by Kapakahili’s company. But reinforcements came up, Kamehameha put the enemy to flight, and pursued them along the main road or they would have rejoined their fellow warriors at Kokomo. At the ascent of ‘Opaepilau, Kapakahili was exhausted and was overtaken. “Slain by Pipili,” Kamehameha boasted over him. (Kamakau 1961:148)

> Of the campaign in Hamakualoa some momentos are still pointed out. The fortified position at Pu‘ukoa‘e on Hanawana, which was attacked and taken by Kamehameha, who had brought his fleet round from Hana. The hill is known as “Kapuai-o-Kamehameha,” to the west of the Halehaku stream, where he encamped for the night after taking Puukoae ... the Maui forces were routed and fled as far as Kokomo, where a final stand was made. (Fornander 1969:236)

#### 3.1.2.2 Battle of Great Canoes

In 1790, Kamehameha then began to muster his armies for a planned invasion of Maui. That summer, Kamehameha landed at Hāna. In a battle known as “Kaua o Kawa‘anui,” (Battle of Great Canoes) Kamehameha defeated the Maui advanced guard there, after which he sailed for Hāmākua Loa, sweeping the remaining Maui defenders along the coast and back into ‘Īao Valley, and annihilating them at the battle called “Kaua i Kapaniwai o ‘Īao” (Battle of the Dammed Water of ‘Īao), during which the slain warriors were said to have been so numerous, that they dammed the water of ‘Īao Stream. Kamehameha then returned to Hawai‘i to settle disputes there. In his absence, both Kahekili and the High Chief of Kaua‘i, Ka‘eokūlani formed an alliance to retake Hāna. After that success, both chiefs launched an attack on Kamehameha at Waipi‘o on Hawai‘i, where they were both defeated. After the death of Kahekili in 1793, Kamehameha assumed the rule over all of Maui, through his victory over the High Chief Kahekili’s successor, the High Chief Kalanikūpule, in the battle of Nu‘uanu on O‘ahu in 1795 (McGregor 2007:99).

#### 3.1.2.3 Landing of the Canoes

Kamakau (1961) provides a passing reference in the context of the fleet of the Hawai‘i Island chief ‘Umi-a-Līloa coming to the aid of the Maui chief Kiha-a-Pi‘ilani in his fighting against Lono-a-Pi‘ilani and the Hāna chief Ho‘olaemakua. The Hāna chief initially repulsed the landings of the Hawai‘i Island canoes and ‘Umi-a-Līloa asks how best to get his men ashore:

> Kiha-a-Pi‘ilani answered, “There is a small harbor at Ko‘olau called Wailua-iki, and if all the canoes can not land there, there is another landing at Wailua-nui.” The blocked canoes turned about and sailed for Wailua-iki at Ko‘olau.
>
> When the canoes reached Wailua-iki, they were dismantled and set upright, and in that way the innumerable war canoes from Hawai‘i could be beached. After all the canoes were beached the men began to go overland to the site of the battle [at Ulaino well to the southeast]. (Kamakau 1961:29-30)

When ‘Umi-a-Līloa’s fleet arrived in Maui, the canoes were so numerous, the shores between the boundaries of Hāna and Ko‘olau were completely filled with canoes.

> Also at the place called the surf of Keanini as far as Pueokahi it was choked with the canoes of the Hawaii people, and so it was off Mokuhano and Naniuakane and Kaihalulu. At Aleamai, Haneoo and Hamoa, these places were completely filled with canoes. At Honokalani and at Honomaele and Ulaino, the boundaries of Hana and Koolau, the canoes were thick. The last of the canoes landed on further at Opikoula, Nahiku, Waiohue, Wailuaiki and Wailuanui in Koolau.
>
> When Hoolaemakua saw the numbers of canoes and men, he and his men prepared to fight the men of Hawaii when the Hawaii warriors arranged themselves on the plain of Kuakaha. (Sterling 1998:122)

#### 3.1.2.4 Battle of Kapalipilo

Kalani‘ōpu‘u and his forces invaded Maui, taking the districts of Hāna and Kipahulu and the Kau‘iki Hill. Ka‘uiki Hill is also referred to as the “fort of Kau‘iki.” Ka‘uiki Hill is a “natural fort and people on it are general safe from assault, being protected on all sides by steep and inaccessible cliffs (Sterling 1998:135).” Several battles were fought, however, Kamehamehanui and the Maui forces attempted and failed to reclaim Ka‘uiki Hill.

> Suddenly, therefore, he [Kalaniopuu] concentrated his forces and war-canoes at Kohala, and, without previous rupture of peace or declaration of war, he invaded Maui, where Kamehamehanui then ruled as Moi, and made a descent in the Hana district. Little or no resistance was offered, and in a short time he possessed himself of the two valuable districts of Hana and Kipahulu, as well as the celebrated fort on Kauwiki Hill overlooking the harbour of Hana. The date of this invasion is approximately, and probably correctly, fixed at 1759.
>
> But Kamehamehanui, though taken by surprise by the invasion of East Maui by Kalaniopuu, was not a man to yield to such a usurpation and affront without an effort to recover the lost districts .... With these forces Kamehamehanui set out for Hana and laid siege to the fort on Kauwiki. Several battles were fought with the Hawaii army under Puna, especially at Makaolehua and at Akiala, where the Maui

> forces were victorious, and in which the valour of Kaohelelani is greatly extolled. The fort of Kauwiki, however, withstood all attempts to take it, and, after a prolonged and unsucessful [sic] siege, Kamehamehanui withdrew his forces, and left Hana in possession of Kalaniopuu, while Puna remained as its governor and chief; and it does not appear that Kamehamehanui again attempted to drive the Hawaiians out of Hana. In the native legends this campaign is called the war of "Kapalipilo". (Fornander 1880:146-147)

This period also saw the arrival of the first European explorer, Captain James Cook, on his pan-pacific voyage. This occurrence would inevitably lead to the arrival of even more European explorers, merchant vessels, and missionary passengers across all Hawaiian Islands, including Maui. The interactions between Hawaiians and these newly arrived visitors would come to mark the reshaping of traditional land use patterns in Hawai‘i toward the islands we see today.

3.1.2.5 European Explorers

In 1778, when Captain James Cook's ships returned from their North American explorations, they stopped at Hāna and encountered Hawaiians for the first time on board the decks of their ships. This came just before the well-known incident that cost Captain James Cook his life on Hawai‘i Island when he attempted to kidnap Kalani‘ōpu‘u for use as ransom (Cordy 2000:294).

In *Exalted Sits the Chief*, Ross Cordy (2000:294) places Kalani‘ōpu‘u at this first point of contact between Hawai‘i and the West:

> Kalani‘ōpu‘u had regrouped and again invaded Maui ca. 1778-pillaging Kaupō and Kaho‘olawe…and raiding and engaging Kahekili's forces in Ko‘olau and Hāmākualoa. It was during this campaign when Captain Cook arrived off Maui's Hāmākualoa in November 1778. Kalani‘ōpu‘u went on board briefly, wearing a helmet with yellow and black feathers and a long feathered cloak. (Cordy 2000:294)

Kalani‘ōpu‘u and Kamehameha I (then, in the war company of Kalani‘ōpu‘u) both visited Cook's ships, indicating who controlled the East Maui region.

In December 1788, William Douglas, commanding the British ship, *The Iphigenia*, arrived at Hāna and continued to sail on to the island of Hawai‘i where he presented Kamehameha with a swivel cannon. This cannon was mounted on a large double canoe, together with several muskets and a quantity of ammunition. In his account of Maui from aboard *The Iphigenia*, Meares (1791:335-336) wrote the following passage:

> We had no longer appeared off Mowee than a great number of canoes came off with hogs, yams and plantains.-On this side of the island there is a large town, the residence of Titeeree, the sovereign of Mowee, who was at this time on a visit to Taheo, king of Atooi, in whose absence the government was left to the care of Harwallanee, brother-in-law to Tianna, of whose arrival he was no sooner informed, than he ordered a present of hogs to the ship; but before it arrived Tianna had observed his brother of shore, and having dressed himself in his best apparel, desired that message might be sent to invite him on board.-On his arrival they met as brothers should do after a long separation; the whole of their conduct to each other was affectionate; they melted into tears, and almost drew the same from the eyes of those who held them. After their first emotions had subsided, the chief

> requested Captain Douglas to remain with him for a few days, and engaged to supply him with any quantity of provisions that might be demanded; but as he saw no place where they could come to an anchor in safety, the surf at the same time beating with great violence, and an heavy swell with the wind blowing in shore, Captian Douglas was under the necessity of declining the invitation. (Meares 1791:335-336)

3.1.2.6 Disease in Remote Hāna

One of the earliest impacts of European contact on Native Hawaiians was the spread of Old-World diseases into island populations. With the arrival of Captain Cook in the late 1770s came the initial introduction of venereal disease and possibly respiratory ailments (Kirch 2012:158). Kirch also suggests that venereal disease is often overlooked in disease impact studies since it does not usually kill its victim “although its effects on a population with no prior exposure may have been more severe than usual” (Kirch 2012:158). Resulting from the introduction of venereal disease, the birthrate very likely plummeted because of the severe effects of disease on women’s reproductive organs who have never been exposed to them. The number of rampant diseases was to increase steadily alongside the number of traders, merchants, and visitors arriving from distant shores. To this effect Kirch (2012:158) observes:

> Later ships brought even more virulent diseases: dysentery, measles, tuberculosis, smallpox, and leprosy. Before Cook the islands were free of all these old-world scourges; consequently, Hawaiian bodies did not have antibodies or resistance against them. As we now know, such ‘virgin soil’ epidemics can have devastating effects on indigenous populations. (Kirch 2012:158)

Although there is serious debate about the actual count of the Hawaiian population at first contact with Europeans, making an exact figure for the depopulation of Hawaiians by disease difficult to grasp, the known effects of the introduction of foreign disease make a population reduction from 500,000 in 1779 to 130,000 fifty years later seem feasible (Kirch 2012:158). Given the histories of European contact in other previously unexposed locations it is likely that morbidity can account for much of the decline. Though early mortality rates are sporadic at best and often inaccurate in their measurements, there is some evidence of the impact of disease in Hawai‘i in this early period.

Lack of demographics regarding salient mortality rates is best explained by logistical issues present in the developing nation of Hawai‘i in the early to mid-1800s. In *Historical Statistics of Hawaii*, Schmitt (1977:40) explains that “statistics on deaths by cause of death are particularly lacking in long term comparability, not only because of serious under-registration in the early years but also because of major changes instituted from time to time in classification procedures.” The first statewide collection of mortality statistics associated to a cause of death did not occur until the early 1900s, and then the statistics were only in terms of individuals affected and were not tabulated according to either ethnic heritage or nationality. Regardless of this glossing of demography, the early records show tuberculosis being particularly ravaging in the beginning of the twentieth century. The first half of the 1900s regularly shows over 1,000 active cases of tuberculosis with as many as 531 deaths annually (Schmitt 1977:80). Record keeping for infectious disease (barring those transmitted by intercourse) gained more coherence by the mid-1900s, demonstrating the most commonly reported disease afflictions across the archipelago were

leprosy, tuberculosis, gonorrhea, syphilis, chicken pox, influenza, measles, mumps, pertussis, shigella, and typhoid (Schmitt 1977:80-82).

From the early census data it becomes evident that one of the most alarming among the contagions was influenza, which in some years had death tolls well above 1,000 souls, with some years having as many as 6,677 (Schmitt 1977:82). Such observations were frequently reported in the local newspapers, such as with an article by Green (1857:1) in *The Pacific Commercial Advertiser*, where the author reported that “we have all been afflicted with the influenza, natives and foreign residents. Not a few of the aged and feeble among the people have died.” Sporadic reports begin to appear with regular frequency in newspaper editorials after this, such as a 10 February article in the Daily Honolulu Press (1883:1):

> In the month of July of this year we had a visitation of Influenza. . . Very many among the foreign population were attacked, and it prevailed extensively among the natives, death not infrequently resulting with the latter, from disposing causes. Among these was John Young (Keoni Ana) the Minister of the Interior, aged only 47 (Daily Honolulu Press 1883:1)

Even with the high instance of mortality among Hawaiians, it should be noted that the person responsible for the census of the Kingdom in the mid-1800s, Richard Armstrong, thought the reported numbers were far too low. He believed that for every reported death two to three went unreported (Daws 1968:140). Flu was not the only concern in the Hawaiian Islands as made apparent by a newspaper advertisement in the 4 October 1892 *Evening Bulletin* announcing the closure of all Hawaiian Ports with the sole exception of Honolulu, due to Cholera outbreaks (Macfarlane 1892:2). Despite the remoteness and relative isolation of East Maui there was still sporadic reporting of disease afflictions affecting the population there.

Smallpox made an appearance in the early newspaper reports regarding disease among residents of East Maui. There is a November 1853 account of the first case of small pox in Hāmākua Loa from a passenger aboard the schooner *Sally* (The Polynesian 1853a:2). In a 24 December 1853 update of the account, the Commissioners of Public Health provide a description of how the disease arrived in the region as follows:

> The woman, as near as we could learn from herself and her husband, left the schooner on Friday evening, and staid over night not far from Kahului. The next day she made her way home: traveling, as we suppose through Hamakuapoko, Maliko and Kalanakahua, and reached her mother’s house, at Haiku, on Saturday night. This was one of five or six houses built as close together as they could stand; and we think from 12 to 20 persons occupied these houses. Sabbath morning some 30 individuals passed within a few rods of the house, on their way to meeting. Once of us rode to the house and saw the woman. At 2 o’clock, P.M., he returned to the house, with the magistrate of the district, and found the woman’s face covered with the small pox. She was ordered to be removed to the infected district, and the house was immediately destroyed, and the village deserted. No other case of the small pox have we had in Hamakualoa. (The Polynesian 1853b:2)

The following month, another update on smallpox in East Maui is provided in the 21 January 1854 edition of Polynesian as follows:

> A correspondent on East Maui writes,-“I am happy to report the state of things on this part of the island, as prosperous. There have been from six to ten cases of small pox in Hamakua, and three deaths. No new case during the past six weeks. We can now report freedom from the small pox, if no new case should be introduced from abroad. There has been no case in Koolau, none in Kula, none in Honuaula, and but one or two in Wailuku. We hear that there are but few cases remaining in the districts of Hana, Kipahulu and Kaupo.” (The Polynesian 1854)

These accounts may have been related to a Honolulu epidemic of smallpox in 1853 and 1854 (Daws 1968:139) and of its impacts to the neighbor islands. It was a large pan-Hawaiian problem of which the population was wholly unprepared. Daws (1968:140) relates the scene of devastation in the more populated cities:

> The Hawaiians had never given much attention to Western ideas about medical treatment, and in this instance they paid a terrible price…Hawaiians fell sick everywhere. Some were abandoned and died alone; their bodies were left to rot. Others were buried where they lay, without coffins, in graves so shallow that wandering pigs and dogs could unearth them. Some native families nursed their sick at home, devotedly and uselessly, and carefully laid the dead under the dirt floors of their thatch huts or in their house yards, following their old burial practices and condemning themselves to follow the dead into the grave. (Daws 1968:140)

Partly because of the cultural gulf that existed between the Hawaiian and Western cultures, many people who had neither the antibodies, nor the knowledge, to combat European scourges passed away.

Although large epidemics were rare in the eastern districts of Maui, when they did arrive, they often had devastating effects. On 2 October 1869, a brief call to action was published in *The Pacific Commercial Advertiser* describing a deadly epidemic that was occurring in Honomanū and throughout the Island of Maui as follows:

> By a letter received yesterday from East Maui, we learn of the continued ravages of the epidemic fever which has prevailed for months on that Island. Rev S. Kamakahiki states, under date of the 23rd, that since the 1st of September there have been fifteen deaths at Honomanu and seven at Keanae, and that a large number of the natives were sick. From another source we learn that the once numerous population of Honomanu valley has dwindled down to two or three families. In behalf of these dying natives, we ask the Board of Health if all has been done that can be done to save them and stay the ravages of the fever? If not, is not the Board censurable? (The Pacific Commercial Advertiser 1869:3)

The ailment to blame for the 1869 outbreak was never explicitly named but given the poor state of disease reporting in general in more populous areas it is unsurprising that only small attention was paid to this affliction from Honolulu newspapers. The testament of the reporter clearly shows that even something as common as fever could have terrible repercussions on isolated and non-immune communities. The precise impact of various diseases on the populations of East Maui is wanting in terms of public recordation, but it does call to mind the many reports of early island wide archaeological studies (Stokes 1916; Thrum 1909b; Walker 1931) that report evidences of extensive habitation and agricultural features lying abandoned throughout East Maui.

### 3.1.3 Mid- to Late 1800s

3.1.3.1 Missionaries

The Hāna region of Maui was known as “one of the most isolated places in these islands, remote and difficult to access” (Bishop 1861). Because of the many treacherous ravines and unpredictable flooding, Native Hawaiians usually rode on horseback to a point before Ke‘anae, then completed the journey to Hāna by canoe. Before the establishment of the Hāna Protestant mission in 1837, missionaries reached East Maui no more than once or twice a year. From the early writings of the Protestant missionaries in the Sandwich Islands, it appears that the first excursion to Hāna by an American Protestant teacher was made in 1823. In regards to this, Richards and Stewart (1825:141) in *The Missionary Herald* write:

> …A similar adventure is related by Honorii [Native assistant to the missionaries], in a late visit to the eastern part of the island of Mowee, whither he went in the company of Keoua, wife of Governor Adams. That part of the island [Hāna] had never been visited by missionaries, and Honorii took occasion to preach to them Jesus Christ. He found them wholly uninstructed, and exceedingly attached to their idols, and disposed to resist every argument in favor of a change in their religion. Before he left the place, he ascended a neighboring hill which overhangs the sea on the top of which were several huge stones erected, covered with tapa (native cloth), and dignified with the appellation of gods. With the aid of some of his company, he succeeded in displacing them from their beds, and rolled them into the sea. (Richards and Stewart 1825:141)

The Protestant mission station of Hāna was administered in its early days by the Reverend Mark Ives and his wife, Mary Ann Brainerd Ives. The Ives were Protestant missionaries who had both arrived from New England in 1836 (Judd et al. 1969:122). The Ives were joined by the Reverend Daniel Toll Conde and his wife Mrs. Andelucia Lee Conde, who were stationed in Hāna following their arrival in 1838 (Judd et al. 1969:72). The isolated missionary station of Hāna was serviced by the 39 ton schooner *Missionary Packet* which had been built in 1825 at Salem, Massachusetts, for use between the Hawaiian Islands, as well as other schooners and steamships (Mifflin 1983:19).

Protestant missionaries, having a strong presence in Hawai‘i by the early 1800s, had almost exclusive claims to managing the salvation of its inhabitants, but the Catholic Church was soon to follow its protestant fellows to Maui’s shores. Catholic missionaries had found a favorable foothold with a few courtiers of Kamehameha III just a year after he passed the Edict of Toleration in 1839. This Edict allowed religious freedom for all inhabitants of the Kingdom of Hawai‘i. Six years later, the first Catholic missionaries arrived in the busy whaling town of Lahaina and found themselves amid a population receptive to their teachings, despite the fact that many of the *ali‘i*, the Protestant missionaries, and the Queen Regent Ka‘ahumanu were outwardly opposed to their presence on Maui (Speakman 1978:87-88). The earliest Maui converts to the recently arrived faith were two brothers, Helio and Petero Kaoeloa from Wailuku (Schoofs 1978:291). The next generation of catechist converts were soon to follow, especially Helio Kaiwiloa who passionately converted from the fold of the Protestant Church into Catholicism. Helio Kaiwiloa had left East Maui to be officially baptized, shortly before returning to Maui to travel the East Maui districts preaching the Roman Catholic faith (Speakman 1978:87-88).

Helio Kaiwiloa’s influence was significant during his lifetime spent preaching in remote East Maui. Schoofs (1978:257) in his *Pioneers of the Faith* describes Helio:

> Kaiwiloa assiduously studied his Christian doctrine and shared his knowledge with others. Going from house to house in Kahikinui he was not a little surprised to find many catechumens. He gathered them in a little chapel, where they said their prayers together and took part in the instructions. Kaiwiloa covered several adjacent villages, displaying great zeal in propagating the faith. (Schoofs 1978:257)

The increase in the number of catechumens acquired by Catholics in the Hāna district became a point of concern for Protestant missionaries, and in 1843 they prevailed upon Judge Mahune of Wailuku to send policemen to investigate the activities of Catholics and catechumen, arrest them, and transport them to Wailuku to stand trial. The charges were simple, that Kaiwiloa had gathered the catechumen once weekly in his private home for the purpose of practicing communal prayer. Perhaps perceived as a type of conspiracy, it was deemed unlawful and ordered to be stopped (Schoofs 1978:260).

Eventually, the Wailuku police made it to remote East Maui to begin the arrests. In one of the first villages they reached they arrested a half-dozen Catholics and moved onto the next village, gathering a few more of the faithful at every stop along the long road back to Wailuku (Schoofs 1978:260). All along the way additional arrests were tied together to manage the ever increasing crowd of offenders, this is why the procession was named the *pa‘akaula* (sometimes *pakaula*), or the “tying, binding with ropes” (Speakman 1978:88). Schoofs (1978:260) then relates the impressive display of solidarity that followed:

> The catechumen of Maui had agreed on the following line of conduct. If any Catholic or catechumen were arrested for any crime other than for his religion, nobody would take an interest in the case. But if, however, anyone were arrested for religion’s sake, all would declare their solidarity and voluntarily join the arrested one.
>
> This is precisely what was done. Going eastward, the ever increasing band passed through Kaupo and Kipahulu, and continued the journey along the north coast of the island until they reached Wailuku. A striking feature of this procession was that the prisoners were dressed in their Sunday best and were wearing gay floral wreathes. (Schoofs 1978:260)

This large display crossed every major *moku* on their way into Wailuku to stand trial, allowing the procession to preach as they travelled through Hāna, Nāhiku, Ke‘anae, Kailua, Ha‘ikū, and Pā‘ia (Speakman 1978:87). The entire distance travelled by the officers and their prisoners covered close to 90 miles of difficult terrain over the course of a month. There were also periodic rests along the way which afforded the persecuted Catholics time to speak with the inhabitants at their brief respites and proselytize, gathering more catechumen into their fold as they proceeded (Schoofs 1978:260).

By the time that the procession had reached Wailuku for their trial the crowd was too massive for the courts to handle. Seeing the size of the crowd containing the Catholics and their sympathizers, Judge Mahune bid all the participants to “go home” and dismissed the charges against the Catholics (Schoofs 1978:260). Helio and his catechumen had prevailed against the

persecution perpetrated by Protestant influences entrenched in Maui. An unexpected benefit of this persecution was that the number of catechumens on Maui had nearly tripled during the ordeal, bringing the count near a thousand adherents. The faithful Catholics then walked the long road back to their homes lead by Helio Kaiwiloa, spreading their faith along the way (Speakman 1978:88). Although religious ideas were developing at a rapid pace in the Hawaiian Islands after European contact, another major change was simultaneously taking place surrounding the relationship of Native Hawaiians to the land they inhabited for generations immemorial, The Māhele.

#### 3.1.3.2 Commercial Enterprise in Hana

A 2 February 1897 article in *The Hawaiian Star* discusses the future of the Hāna region from the perspective of the continued growth of industry and commerce in Hawai‘i at the turn of the century (The Hawaiian Star 1897). Hāna and the undeveloped slopes of East Maui are described as one of the last natural environments remaining in the State in the following excerpts:

> The district of Hana is one of the least known to the general public of any districts on the Islands. Beyond the fact that there are three sugar plantations, viz: Hana, Reciprocity and Kipahulu, the average citizen of Honolulu knows very little about it. It is one of the districts that, like Kona and Puna, will one of these days awake out of sleep.
>
> The prospects of the Hana district are good. The sugar plantations lie on the belt of the undulating land at the extreme east of the Island. To the northwest of Hana Plantation there is an extent of country stretching for twelve or fourteen miles, which, at one time, supported a large population, but which at present time has only a scattered villages here and there.
>
> The energy to develop these lands must come from without, it can never come from within. Again, it is not only energy and capital that are required, but roads. The roads of the portion of the Hana district have hardly been touched since the days of Dr. Judd, who, so far as memory serves, had the present so-called road constructed. (The Hawaiian Star 1897:4)

The ambition for successful commercial cultivation in East Maui continued to be the focus of all endeavors throughout the mid- and late-1800s. Sugar, coffee, and rubber plantations were started throughout the region with high hopes of success (Figure 5). A 19 December 1898 article in *The Hawaiian Star* documents a large land sale in Nāhiku and describes the beginning of “the awakening” of the region to foreign industry in the following excerpts:

> The land sale which took place at Paia on Saturday afternoon, December 17th, was indeed a phenomenal one. There were three lots for sale, and each of them sold for a little over five times the appraised price.
>
> The lands in question are situated in Nahiku among the Palis of East Maui. A couple years ago it would have been hard to give the land away and no one wanted it, unless the chances of permanent government and therefore capital were assured. So the land lay a waste of guava scrub, ferns, ohia, kukui, lauhala and so forth. The thundering waterfalls crashed over the cliffs and the streams roared over their rocky

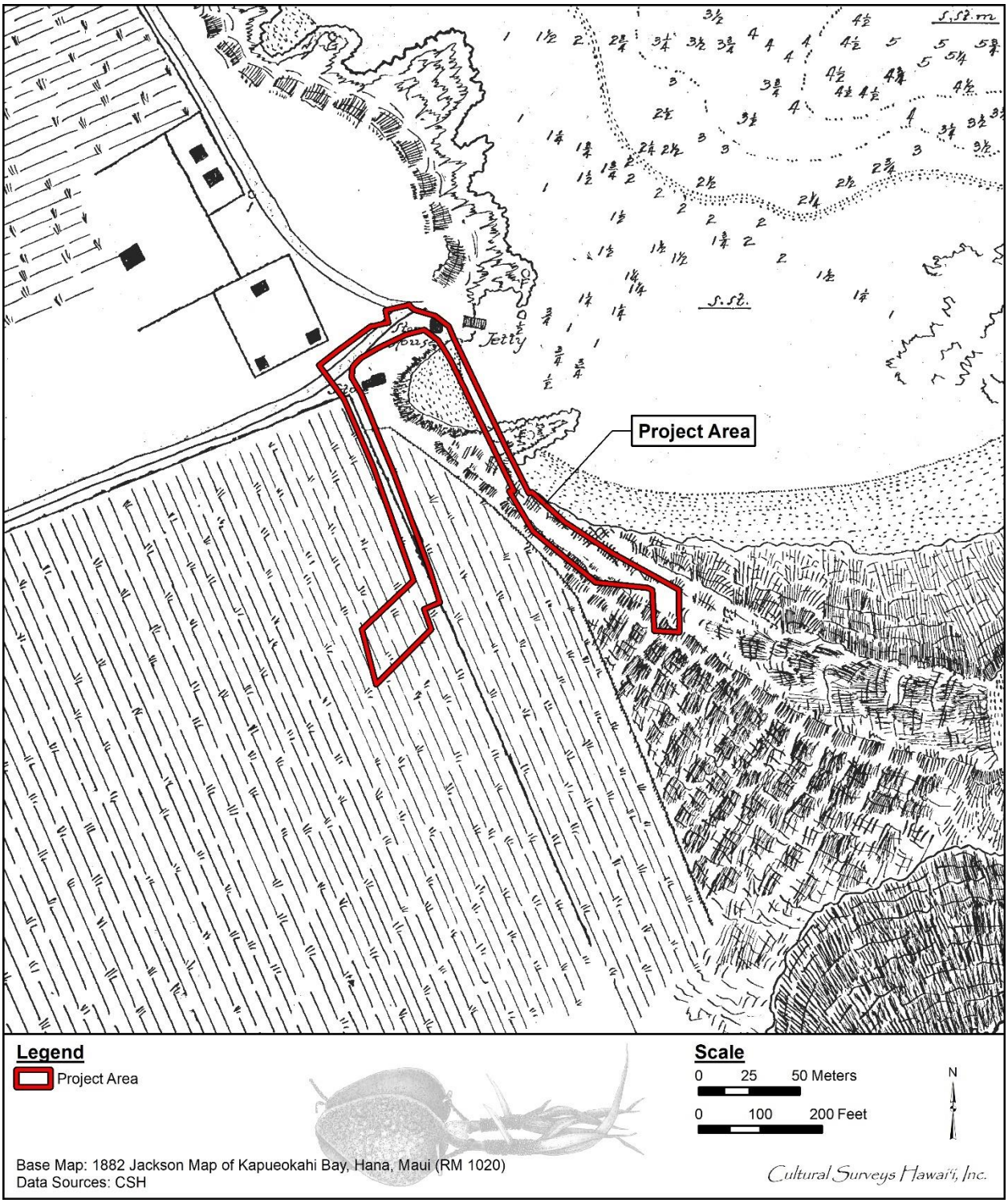


Figure 5. Jackson (1882) map of Kapueokahi Bay showing agricultural fields within and surrounding the project area along with several structures

> beds to the ocean, with no tribute to the soil in the shape of irrigation. For miles there would be no habitation.
>
> Now all this is being changed. The district, one of the most fertile on the Islands, awakes out of its lethargy. The valleys which have only heard the roar of the cataract and the rush of the stream will wake to the sound of the steam whistle and the ax, and man will enter upon his kingdom. Cultivation and civilization with reign, but the wild beauty of the Koolau district with be gone. Again this is progress under annexation. (The Hawaiian Star 1898)

### 3.1.4 The Māhele and the Kuleana Act

Initiated by the Organic Acts of 1845 and 1846, the most significant change in land-use patterns and allocation came with the Māhele of 1848, and the subsequent privatization of land throughout Hawai‘i. This action hastened the shift of the Hawaiian economy from subsistence-based to market-based, which has drastically altered the cultural and environmental landscape of Hawai‘i. During the Māhele, all lands in the Kingdom of Hawai‘i were divided between *mō‘ī* (king), *ali‘i*, *konohiki* (resident overseers of an *ahupua‘a*), and *maka‘āinana* (tenants of the land), which allowed the land to pass into the Western land tenure model of private ownership. On 8 March 1848, Kauikeaouli (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners (Chinen 1958).

Native Hawaiians who desired to claim the lands on which they resided were required to present testimony before the Board of Commissioners to Quiet Land Titles. Upon acceptance of a claim the Board granted a Land Commission Award (LCA) to the individual. The awardee was then required to pay in cash an amount equal to one-third of the total land value or to pay in unused land. Following this payment, a Royal Patent was issued that gave full title of ownership to the tenant (Chinen 1958:8-14). In this way, the government of Hawai‘i offered land for sale to both Native Hawaiians and foreigners. Such lands were referred to as Royal Patent Grants or as Grants.

On 19 October 1849, the Hawaiian Privy Council adopted resolutions to protect the rights of Native tenants, the *maka‘āinana* (common people/tenants of the land). The Kuleana Act of 1850 confirmed these rights. Under this act, the claimant was required to produce two witnesses who knew the claimant and boundaries of the land, knew that the claimant had lived on the land for a minimum of two years, and knew that no one had challenged the claim. The land also had to be surveyed. Native tenants or naturalized foreigners who could prove occupancy on the parcels before 1845 could be awarded lands they occupied or that they cultivated as *kuleana* (land holding of a tenant or *hoa‘āina* residing in the *ahupua‘a*) awards. No commutation fee was necessary to apply for a Royal Patent for a *kuleana* award, as the commutation fee had presumably already been paid by *ali‘i*/*konohiki* who had been awarded the entire *ahupua‘a*, or an *‘ili* (a land division within an *ahupua‘a*) in which the native tenant claimed his own small parcels (Chinen 1958:29-30).

Land sales to foreigners became allowed through the passing of the Alien Land Ownership Act in 1850. Despite the effort to allocate lands to the *maka‘āinana*, the *ali‘i* control of the majority of lands persevered and much of these lands were ultimately obtained by foreigners for commercial agriculture and ranching enterprises. In many cases, land sales to foreigners were vast and often encompassed large portions of the *ahupua‘a* in which they were located. Additionally, while *kuleana* awards were granted to native tenants in fee simple and free of commutation at Honua‘ula,

payment to the government surveyors and Land Commission to cover costs to survey the lots also became a factor in decisions to keep or abandon claims. According to Alexander (1890:119), between 1850 and 1860, nearly all desirable government lands were sold.

There are four LCAs in the vicinity of the project area with one, LCA 387:5, that the project area overlaps. Four Land Grants, Grants 634:2, 634:3, 650, and 883, are also in the vicinity of the project area and the project area overlaps Grants 634:2 and 634:3 (Table 3 and Figure 6 through Figure 8).

The foundation for private land ownership set by the Māhele of 1848 began a very marked pace of development across the entire archipelago, and Maui was no exception to the age of Western development that was about to dawn across the island. The Māhele enabled many foreigners and foreign nationals to acquire land for the establishment of ranching and plantation operations, including the infrastructure projects that were aimed at supporting these land-intensive industries (aqueducts, roads, etc.). All of this was happening alongside civic development in the more populated areas as the Hawaiian economy grew, a growth funded in part by the government land sales to foreigners. Additionally, many foreign nationals who relocated to Maui to work were enabled to acquire their own homestead lands, and thus establish themselves and future generations on the island, increasing the ethnic and cultural diversity of Maui. Though these changes would signify a new period of economic growth for the Kingdom of Hawai‘i as a whole, the pace of development would continue to impact the social and environmental landscape of East Maui.

Table 3. LCAs and Grants within the vicinity of the project area

| Award # | Type | Claimant |
|---|---|---|
| 387:5 | LCA | ABCFM |
| 419:1 | LCA | Kawainui |
| 419:2 | LCA | Kawainui |
| 615 | LCA | Mose Ulunahele |
| 634:2 | Grant | Gerrit P. Judd |
| 634:3 | Grant | Gerrit P. Judd |
| 650 | Grant | Maui |
| 883 | Grant | Gerrit P. Judd |

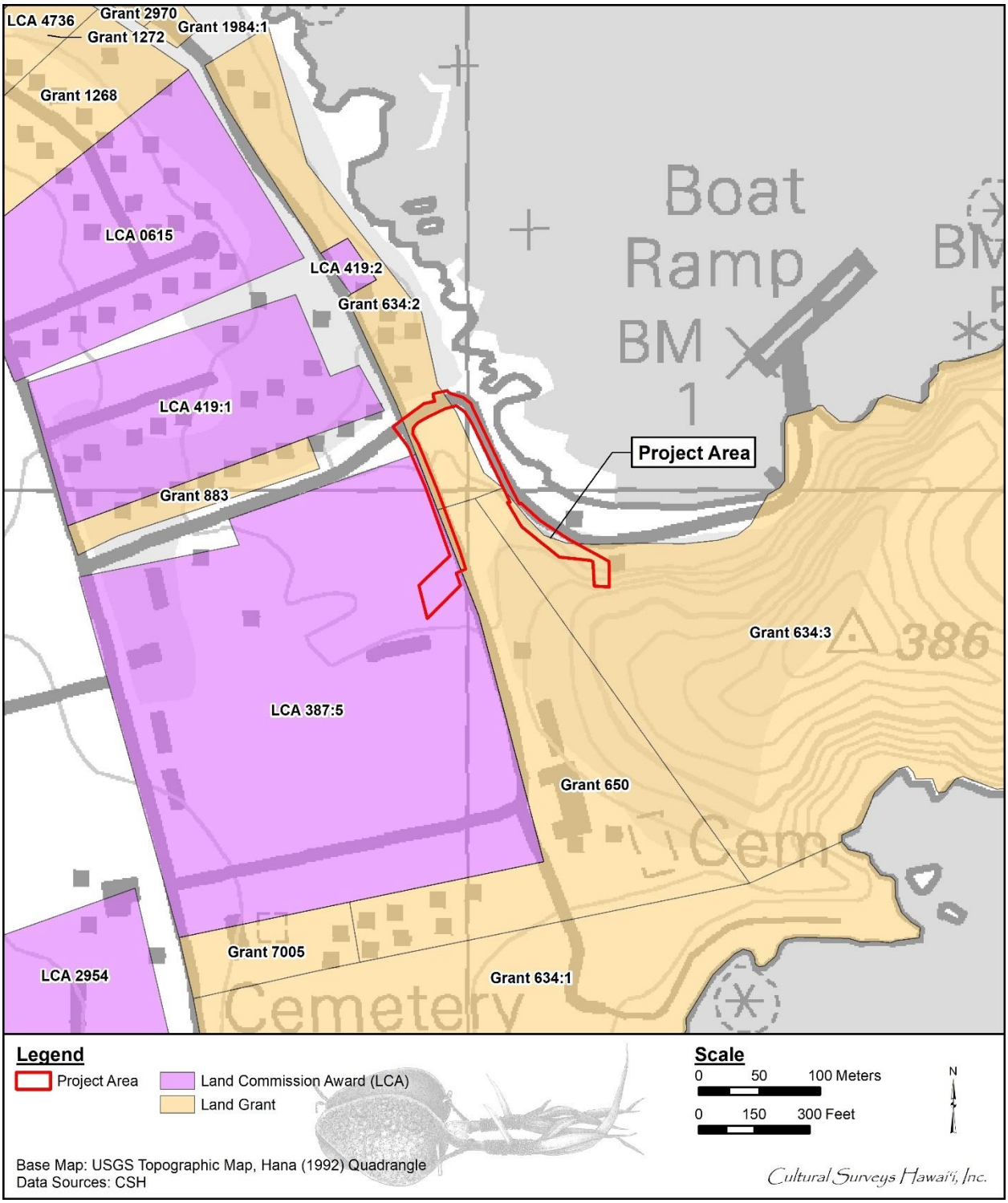


Figure 6. Portion of the 1992 Hana USGS 7.5-minute topographic quadrangle showing Land Commission Awards and Land Grants in the vicinity of the project area (U.S. Geological Survey 1992)

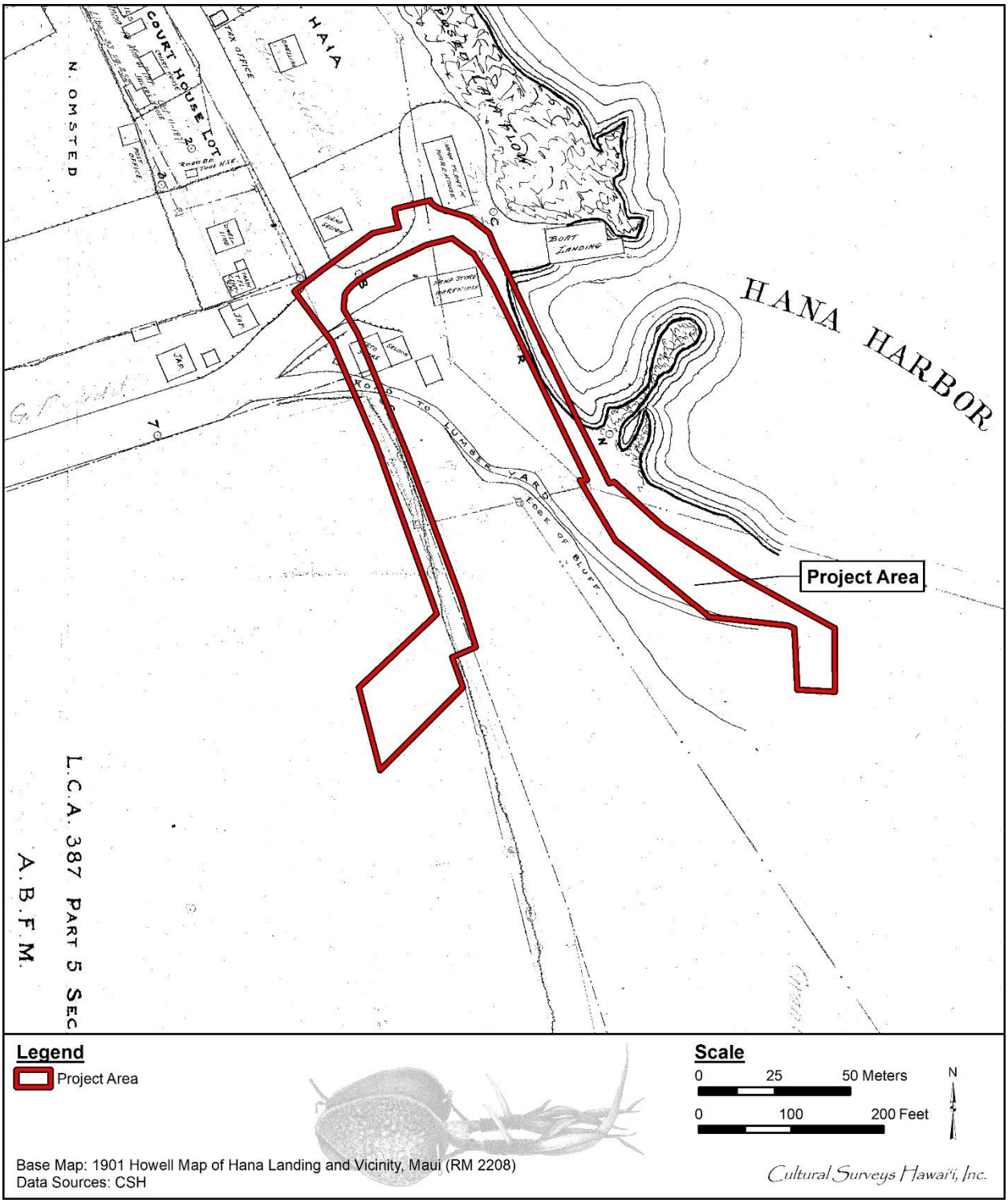


Figure 7. Portion of a Howell (1901) map of Hāna Landing showing LCA 387 and surrounding development

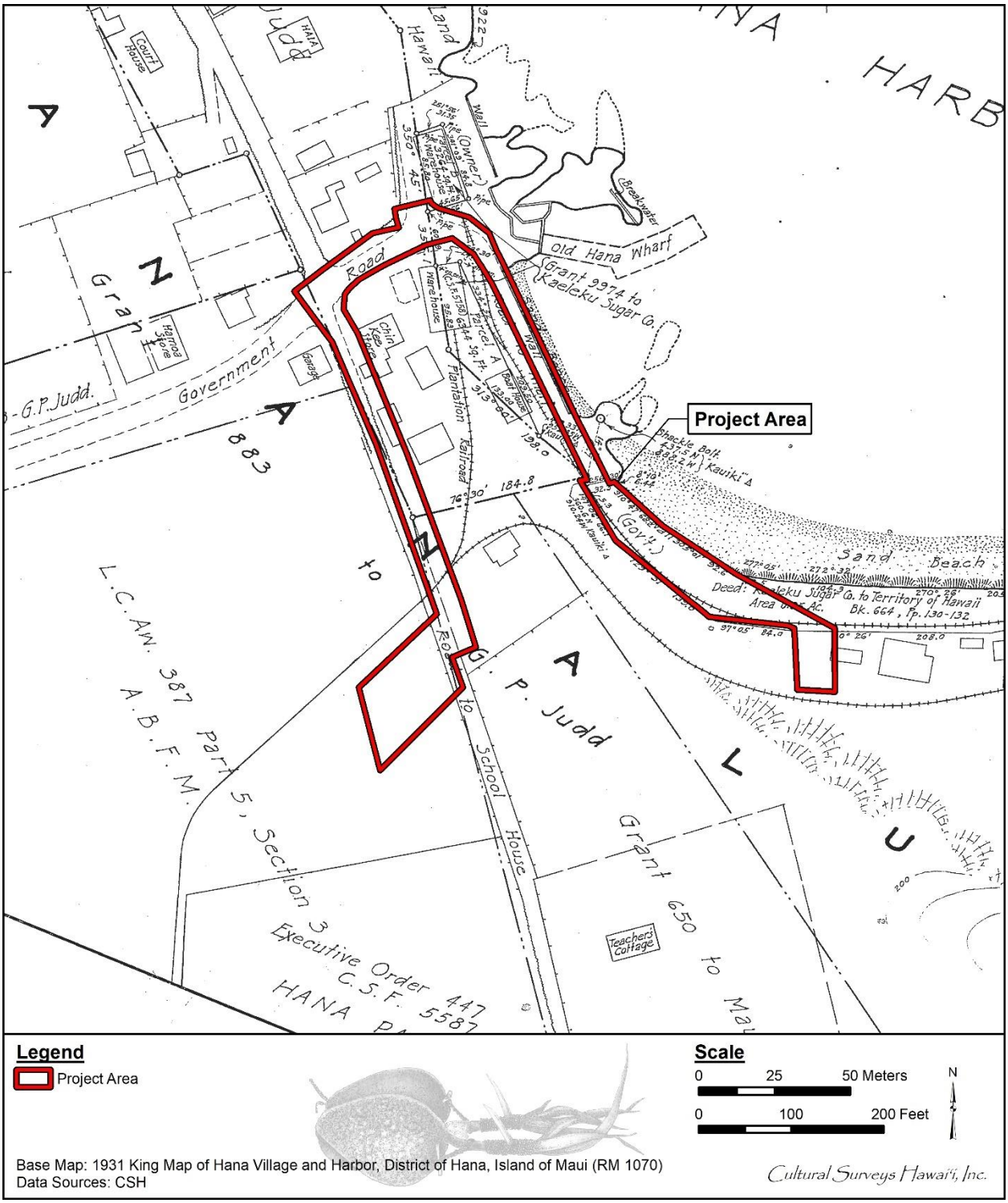


Figure 8. King (1931) map of Hāna Village and Harbor showing the project area surrounded by Land Grants and the presence of a plantation railroad corridor

### 3.1.5 1900s

According to the Census Bulletin of 1900, the population of Hāna District was reported to be 5,276 and the population of Makawao District was reported as 7,236 (Thrum 1909a:18). The Board of Health reported 755 births and 422 deaths in Maui County in the year 1900 (Schmitt 1977:13). An interesting population dynamic of this period is that while the populations of the Wailuku and Makawao districts continued to grow by at least a thousand inhabitants every ten years, there is a corresponding negative effect on the population of Hāna. Official census figures have the Hāna population shifting from 5,276 persons in 1900 to only 969 persons in 1970 (Schmitt 1977:13-14). While disease and urban drift may play a role in these figures, there is also the added regional strain of the establishment, and subsequent collapse, of agricultural industries throughout the East Maui region. While East Maui was originally slotted for agrarian development by early developers, this industry would, during the twentieth century, gradually give way to tourism as its primary draw to visitors and businessmen.

A feature section in the 4 September 1910 edition of the *Honolulu Advertiser* documents an August 1910 tour through the Hāna District of Maui by H.M. Ayres, a reporter for the paper (The Honolulu Advertiser 1910:13). The tour, which began on the government road and then continued along the Koolau Ditch trail, provides a first-hand account of the region, albeit from an outsider's perspective, along with photographs of homesteads, homesteaders, landscapes, and prominent structures. While passing through Honomanū Gulch, Ayers relates "…there is none more impressive in the islands. Its beauty baffles description and were its attractions name widely known, tourists in plenty would assuredly visit…" (The Honolulu Advertiser 1910:13). Continuing along the ditch trail to Ke‘anae, Ayers stopped at the house of Halemano and recounts the following observations of life in Ke‘anae:

> At the house of Halemano we were made very welcome, supper being ordered by our host at a Chinese restaurant nearby. He naively remarked that poi and fish were no good for haoles. Halemano, who is postmaster and political boss of the precinct, is a dignified old native. His house is on the campaign circuit and when election time rolls round there are stirring times at his residence. His daughter, Aunie, is easily the belle of the district.
>
> Many of the Keanae girls have Chinese husbands and appear to be quite happy with them. They are better providers than the Hawaiians and this probably accounts for the phenomena.
>
> Before leaving Keanae we offered to buy a squid stone from Halemano but the old man refused to part with the relic, declaring that it was his wife's and that he didn't need the money-a rare thing with the average Hawaiian today.
>
> While we were in Keanae the natives were conspicuous by their absence. Returning for some article that I had forgotten, after my departure, I found quite a gathering discussing the business of the malihini haoles while across the rice fields men, women, and children were hastening toward the house of Halemano. (The Honolulu Advertiser 1910:13)

#### 3.1.5.1 Jack London

In the summer months of 1907, renowned travel writer Jack London and his second wife Charmian, stopped at Maui on the South Pacific portion of their sailing trip around the world to travel the ditch trail across the Hāna District. His horseback travels around Haleakalā and overland to Hāna appeared in his book “The Cruise of the Snark,” a non-fiction account of London’s travels and experiences during their world tour that was published in 1911. In select excerpts from London’s book reprinted in *The Honolulu Advertiser* (1914:10) the beautifully rugged East Maui coast is described as follows:

> The windward side of Haleakala is serried by a thousand precipitous gorges, down which rush many torrents, each torrent of which achieves a score of cascades and waterfalls before it reaches the sea. More rain comes down here than in any other region in the world… Hundreds of inches of rain annually, on fertile soil, under a tropic sun, means a steaming jungle of vegetation. A man, on foot, cutting his way through, might advance a mile a day, but at the end of a week he would be a wreck, and he would have to crawl hastily back if he wanted to get out before the vegetation overran the passage way he had cut. (Jack London in The Honolulu Advertiser 1914:10)

London also observed the lay of the land near the Ko‘olau Gap in Haleakalā Crater, travelling into Hāna, Ke‘anae, and eventually Nāhiku. As a keen observer and seasoned writer, London took notice of the abundance of water flowing from the local watersheds. London also inspected the rubber plantation at Nāhiku and traveled by way of the Nāhiku Ditch Trail, of which he commented:

> Water means sugar, and sugar is the backbone of the Territory of Hawaii, wherefore the Nahiku Ditch, which is not a ditch, but a chain of tunnels. The water travels underground appearing only at intervals to leap a gorge, travelling high into the air on a giddy flume and plunging into and through the opposing mountain. This magnificent waterway is called a “ditch,” and with equal appropriateness can Cleopatra’s Barge be called a box-car… There are no carriage roads through the ditch country, and before the ditch was built, or bored, rather, there was no horse-trail…O’Shaughnessy was the daring engineer who conquered the jungle and the gorges, ran the ditch and made the horse-trail. He built enduringly, in concrete and masonry, and made one of the most remarkable water-farms in the world. Every little runlet and dribble is harvested and conveyed by subterranean channels to the main ditch. But so heavily does it rain at times that countless spillways let the surplus escape to the sea. (Jack London in The Honolulu Advertiser 1914:10)

London’s visit to East Maui could not have been better timed and his observations more appropriate considering the ongoing development of agricultural endeavors in the Hāna District. Surely his descriptions of the local watersheds, his experiences in plantation communities, and the feats of engineering that connected them would reach many readers abroad by way of his penmanship. Even the impressive engineering feats London witnessed in this environment could not detract from the wildness of the surrounding countryside he observed:

> The vegetation ran riot over that wild land. There were forests of koa and kolea trees, and candlenut trees… Wild bananas grew everywhere, clinging to the sides

> of the gorges, and, overborne by their great bunches of ripe fruit, falling across the trail and blocking the way. And over the forest surged a sea of green life, the climbers of a thousand varieties, some that floated airily, in lacelike filaments, from the tallest branches; others that coiled and wound about the tree like huge serpents; and the one, the ie-ie, that was for all the world like a climbing palm, swinging on a thick stem from branch to branch and tree to tree and throttling the supports whereby it climbed… In fact, the ditch country is nothing more nor less than a huge conservatory. Every familiar variety of fern flourishes, and more varieties that are unfamiliar, from the tiniest maidenhair to the gross and voracious staghorn, the latter the terror of the woodsmen, interlacing with itself in tangled masses five or six feet deep and covering acres. (Jack London in The Honolulu Advertiser 1914:10)

#### 3.1.5.2 Sugar Industry in Hāna

Sugar was an indigenous crop, but small-scale commercial harvesting of the crop began in the mid-1800s (MacLennan 1995:97). Hāna was one of the earliest locales to become involved in commercial cane operations in “1849 or 1850, when a Mr. Lindgren cultivated 60 acres of cane and ground it with a mill erected in a grass shack” (Condé and Best 1973:247). This grass shack mill was reported to be in the Haneo‘o Hāmoa flats *makai* of the Hāna Highway. In 1861, Mr. August Unna gained control of these and other sugar plantation lands and began two decades of land consolidation and improvements including construction of the plantation railroad (Condé and Best 1973:248). During this early period of commercialization, small farmers apparently raised cane crops within LCAs and grants, and then sold the cane to the mills. By the end of the century, Hana Plantation had taken over large tracts of land and smaller farmers disappeared, as did most of the remains associated with this era (Condé and Best 1973:247–250).

The Hana Plantation continued to mechanize throughout the early 1900s when Theo H. Davies and Company assumed ownership from Grinbaum. The plantation name changed to Ka‘eleki‘i Sugar Co. with the Theo H. Davies acquisition, and it was at this time that the virtual disappearance of former features took place (Condé and Best 1973:247–250). The use of natural bedrock outcrops, ledges, gulch edges and lava flow edges to pile excess rocks is an observable pattern of past land utilization, especially of the commercial sugar cane era. Some of these rock piles or “waste areas” were designated as archaeological sites (Borthwick et al. 1992:16). Maps from 1919 and 1931 depict two large warehouses for the Kaeleku Sugar Company near the entrance to Hāna Landing (see Figure 8 and Figure 9).

In 1933, the ownership of the plantation changed to C. Brewer & Company. By 1945, the plantation closed and was liquidated (Condé and Best 1973:250). In 1946, Paul Fagan, previous owner of Pu‘u o Hoku Ranch on Moloka‘i as well as Maunawili Ranch on O‘ahu, purchased 14,000 acres of Hana Plantation. Mr. Fagan converted the plantation to a cattle ranch and began Hotel Hāna Maui the same year. The conversion from sugar to pasture lands was done for the most part by the cattle themselves, who were put in the abandoned cane fields to graze, thus destroying the cane (Hāna Ranch, n.d.).

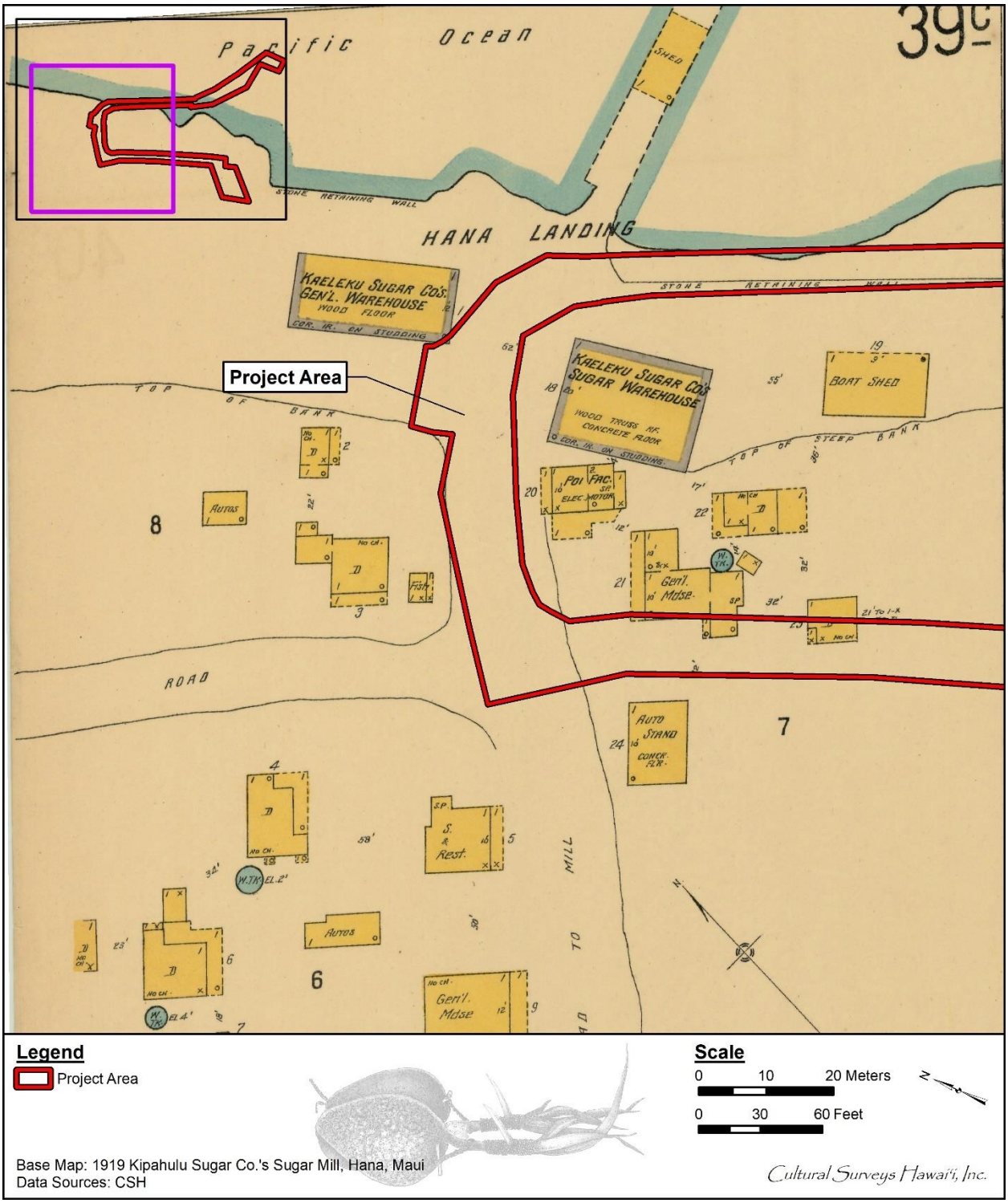


Figure 9. Portion of the (Kipahulu Sugar Co. 1919)

#### 3.1.5.3 Hāna Highway Historic District

The paving of the Hāna Highway in 1962 increased tourist visitation in the project area vicinity. Afterwards, infrastructure and development projects in the 1970s through the present shaped the current landscape (Smith and Eadington 1992:128) (Figure 10 through Figure 12).

The catalyst for development in Hāna is described in *Tourism Alternatives: Potentials and Problems in the Development of Tourism* by Smith and Eadington (1992:12):

> In the early 1980s, after battles with the community over its plans to expand and upgrade its facilities, the Hana Ranch Company sold its holdings to the Rosewood Corporation, which was owned by the Caroline Hunt Trust Estate. The corporation is active in oil, gas, venture capital, real estate, and tourism. With the initial $20 million purchase price, the corporation bought the 4,500-acre Hana Ranch, Hana Water Resources, Hana Water Company, Hana Maui Transport Company, Hana Land Company, Hana Pacific, Inc., Zen at Hana Ranch (horticulture), Hana Ranch Ltd., and Hana Stockers Company. The present operation employs close to 400 people out of a total estimated population of 2,000. (Smith and Eadington 1992:128)

The Hāna Highway Historic District, which extends from Hoalua Bridge near Huelo in the Makawao District to Koukouai Bridge in the Kīpahulu District, includes 78 contributing feature components dating to over 50 years old. The Hāna Highway was also recognized as a Millennium Legacy Trail in 2000, and in 2001 was nominated to the National Register of Historic Places (NRHP). A total of 73 contributing resources of the Hāna Highway Historic District were documented within the district’s NRHP registration form (Duensing 2001). A Historic American Engineering Record (HAER) No. HI-75 for the Hāna Belt Road was published by the National Park Service in 2005 to provide descriptions of the historic architectural and engineering features of the Hāna Historic District (Duensing 2005). Of the 78 component features of the Historic District approximately 56 of the bridges/culverts exist between Hāna and the central isthmus of Maui along the north shore of the island.

The general path of the road is much older than the existing historic highway. It has predecessors as early as the time of the Maui King Pi‘ilani’s Alaloa (“long road”) and Kihapi‘ilani’s addition to the Alaloa known as “The Kings Trail” in the 1600s, to the time of the “Ditch Trail” that ran alongside the early water catchment and diversion ditches for agriculture in the early 1900s. The Hāna Highway was first built with the intent to circumscribe East Maui with a levelled road surface in 1900, complete with gulch spanning bridges. The initial roadwork of the early 20$^{th}$ century was piecemeal and incremental at best, sometimes making use of horse and foot trails connecting otherwise isolated sections of road (Duensing 2005).

Dawn E. Duensing in Hāna Belt Road HAER HI-75 (2005:29) describes the difficulty of working on the early road as follows:

> The work required in the Hana District was quite extensive due to the heavy rainstorms and freshets. At times flooding during the winter rainy season made it impossible to travel on the Hana Road…mail carriers were unable to complete their rounds, so the SPW [Superintendent of Public Works] ordered foot bridges built over deep gulches. Travelers were stuck with difficult overland travel on horseback

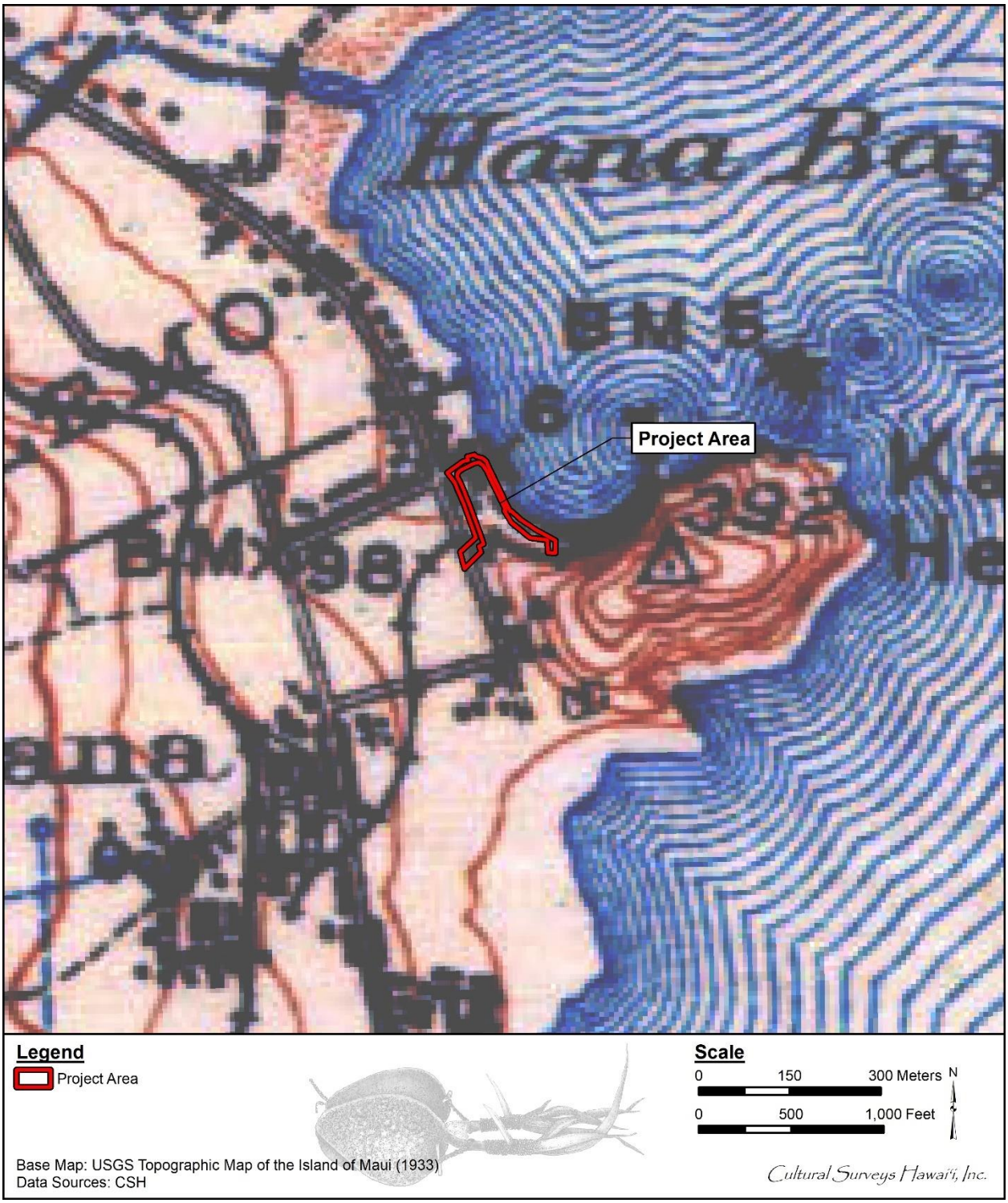


Figure 10. Portion of the 1933 Maui Island USGS 7.5-minute topographic quadrangle showing the location of the project area (U.S. Geological Survey 1933)

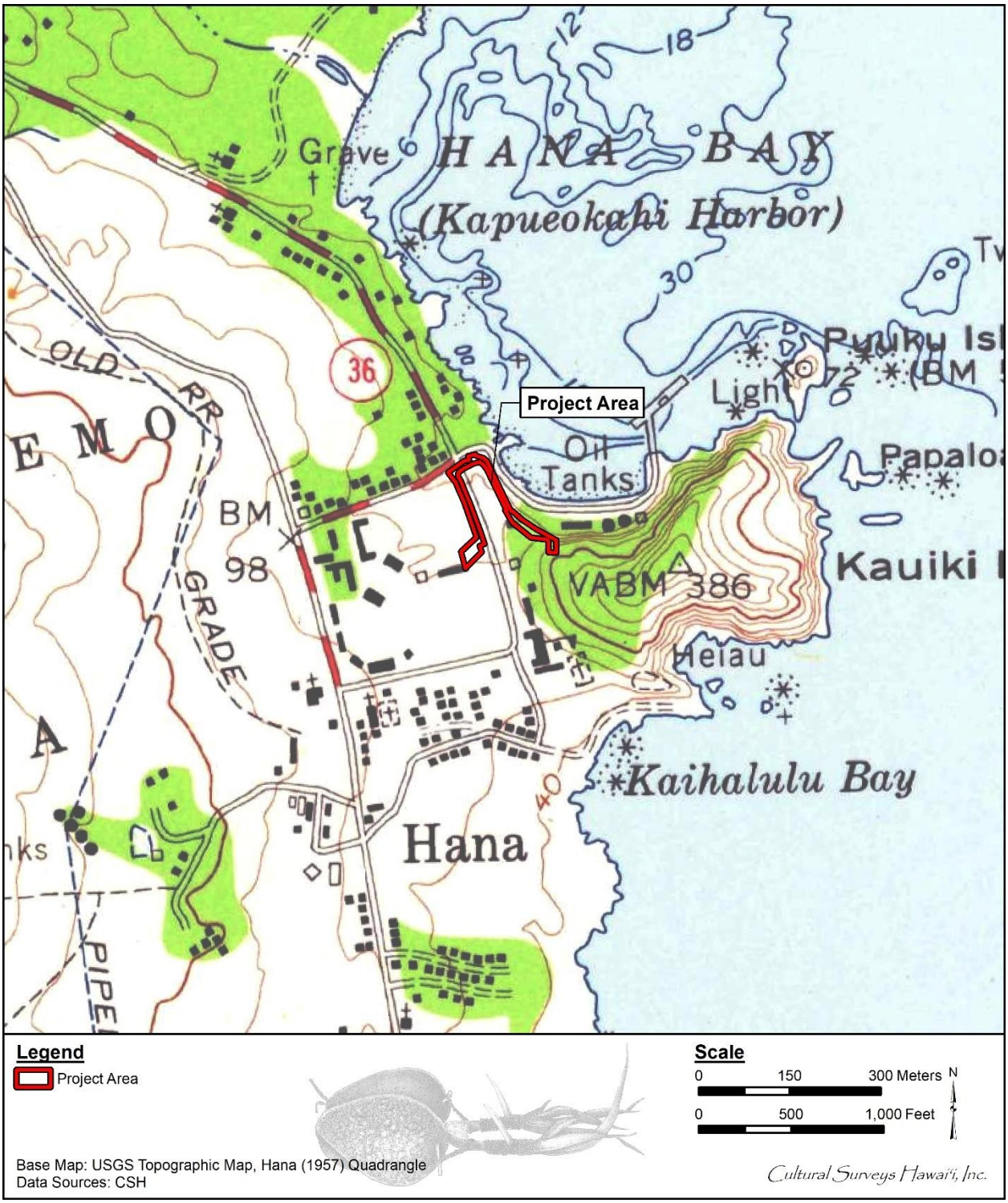


Figure 11. Portion of the 1957 Hana USGS topographic quadrangle showing the project area

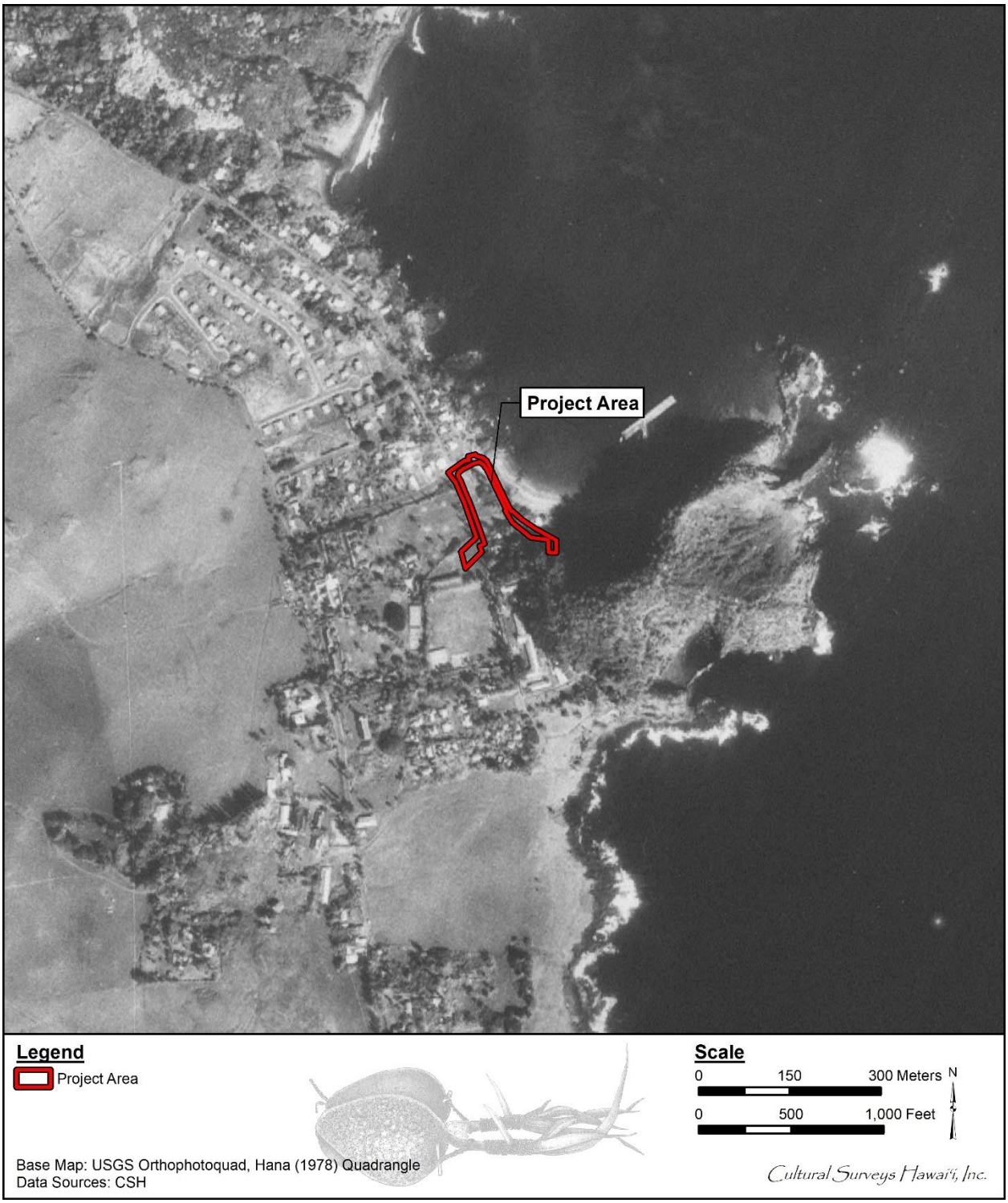


Figure 12. Portion of the 1978 Hana USGS orthophotoquad showing the project area

> or by steamers, which used what one resident called the "most impractical landings." (Duensing 2005:29)

Many of these problems were alleviated with the passing of the County Act of 1905 that established county government throughout the State of Hawai‘i, an important function of which was to appoint a county engineer by the name of Hugh Howell to oversee civic projects like the Hāna Belt Road. Replacement of the bridges was of utmost importance to the Hāna Belt Road project since "many of the [existing] bridges had deteriorated from rot and had trusses that were considered dangerous" (Duensing 2005:30). Howell's program of replacing the truss type bridges with concrete pier-type bridges was first implemented across ‘Ohe‘o Gulch amounting to a 70 foot span. Although construction of these new type of bridge foundations were expensive, Howell argued that it represented an economic reconstruction since concrete piers required less maintenance than the trusses, which reduced necessary maintenance cost from an estimated $50 per year to $5 per year. Part of these savings in maintenance also originated in Howell's use of crude oil and carbolineum to help protect the wooden superstructure against the moist tropical air and environment (Duensing 2005).

Construction of the road was slow for several years as the existing funding for the project was extremely limited and insufficient, having originated at that time from small amounts of money parceled out yearly by the government for the completion of consecutive sections of the road. This financial difficulty combined with the physical difficulty of building the road had the project approximately 10 years behind schedule by 1909. The formation of the Maui Loan Fund Commission (MLFC) in 1911 enabled the project to move forward with a more permanent capital improvement by replacing all timber bridges with concrete. The formation of the MLFC and the regularity of funding enabled the construction of the first several concrete bridges enumerated among the Hāna Highway Historic District. The bridges constructed during the initial implementation of this funding were those named: Waikomai, Kōlea, Honomanū, Nua‘ailua, Mo‘omonui, Waiakoi, Pa‘ihi, South Wailua (Honolewa), and Koukou‘ai (Duensing 2005).

By 1920, the project saw the completion of many additional concrete bridges to the belt road, however, the belt road itself was far from complete as it still did not connect at several points. Also, during 1920, the MLFC decided that it would suspend funding for the Hāna Belt Road for a few years to allocate funds to roads nearer the Central Isthmus that were seasonally inhibiting pineapple harvests due to poor conditions. The suspension of the belt road project continued until 1923 when Maui's business and civic leaders, along with the Hawai‘i governor Wallace Farrington, became proponents of a resurgence of civic interest in the project. This revitalized interest fueled a massive organized effort to complete the section of the road from Kailua to Ke‘anae, which was completed by its projected finish date in 1925 (Duensing 2005).

The construction of the next section of the Hāna Belt Road began shortly after the completion of the Kailua to Ke‘anae section and was boosted by a substantial bond from President Calvin Coolidge issued to the Territory of Hawai‘i that included $150,000 for completion of the proposed 3.5 mile stretch from Ke‘anae to Wailua Iki. This stretch would prove to be the most difficult portion of road to create due to the many serried ridges of hard volcanic stone that had to be blasted through, and because of the occasional slipping of steam shovels into deep gorges and mechanical issues associated with their employment in the process of rock breaking. Occasional flooding and landslides were also a discouraging element of constructing the belt road, having been responsible

for several instances of burying the steam shovels under their downslope aftermath. The final stretch of road was completed with the construction of Wailuanui Bridge in 1926, which had itself been setback by a landslide that sent 600 bags of concrete needed for its construction coursing down the adjacent gulch and out to sea (Duensing 2005). The Hāna Belt Road was completed and opened to the public in 1926 and effectively ended Hāna District's centuries of geographic isolation from the rest of the island. Although the public had begun travelling the road, several bridges were operational but incomplete. All the original bridges that comprise the historic road were not completed until 1947, and the road itself lacked a complete pavement up until the 1960s (Duensing 2005).

The type of component structures of the Hāna Historic District consist mostly of bridges and culverts including masonry arch bridges, concrete bridges, concrete arch bridges, and stone and concrete culverts. Since the road had been scarcely maintained since the final paving of the surface in 1962, it had been ravaged by the passing of time, showing few contemporary improvements aside from the addition of guardrails and pavement patch on the road surface.

In the 1990s, the State of Hawai‘i responded to the need to repair the Hāna Belt Road and implemented a preservation plan for the entire length of state-owned road between Huelo and Hāna. The preservation plan called not for the preservation of the bridges themselves, but instead sought to retain the "character" of the road with its narrow bridges and winding cliffside roads. This proved to be a challenge as the funds offered by the Federal Highway Administration (FHWA) required the roads to be widened to their standard widths of 36 feet, with some of the existing roads only being about 16 feet wide. Ultimately the historic width of the bridges was allowed to remain narrow, conditional upon approval by the FHWA on a case-by-case basis. As a result of this ongoing maintenance work the historic district has been thoroughly researched and described in detail by multiple studies (Duensing 2001, 2005; McCurdy et al. 2014; MKE Associates LLC and Fung Associates 2013; Nagamine Okawa Engineers Inc. and Fung Associates 2015; Oceanit 2000; Wilson Okamoto & Associates 2001)

Ultimately, the Hāna Belt Road was deemed a historic property of significance (State Inventory of Historic Places [SIHP] # 50-50-13-01638) due to the efforts and achievements surrounding its construction. Duensing (2005:55-56) clarifies the roads effect on the region:

> The Hana Belt Road was a substantial public works achievement…during an era when Maui, especially Hana, was quite isolated from the rest of the world… the Hana Belt Road also involved the expertise of highly trained engineers and designers…Although some of the construction work was contracted out, county employees did nearly all the design and engineering work. (Duensing 2005:55-56)

In that the Hāna Belt Road still serves its original function of connecting isolated Hāna to the central plains, and that it has undergone very little cosmetic changes in the ensuing 70 years since its construction, it has a preserved character and function that has changed very little since its construction. Although the Hāna Belt Road was constructed to more sufficiently connect and develop the remote eastern side of the island, the opposite effect has been documented because of the narrow winding nature of the historic highway. Duensing (2005:59) clearly illustrates this point as follows:

> The lack of easily-travelled, high-speed traffic artery has served to impede substantial development…There are no fast food chain restaurants, chain stores,

> strip malls or sprawling subdivisions along the Hana Belt Road. Travelers…are served by the occasional roadside stand and must drive all the way to Hana for limited conveniences such as groceries, gas, and restaurants. With a sizeable population of residents of Hawaiian ancestry, Hana is often cited as Maui's "most Hawaiian community". (Duensing 2005:59)

By way of reduced efficiency of travel to the Hāna region, a problem the Hāna Belt Road had originally intended to rectify, the east side of the island has developed at a significantly slower pace than the vacation communities located on the southern and western shores of Maui. The novel architectural features of an early twentieth century road combined with an awe-inspiring slow drive through densely vegetated jungle and deep gulches have afforded the Hāna Belt Road a character uncommon in most civic projects of the early twentieth century. As such, the Hāna Belt Road was later deemed the Hāna Historic District and afforded protection on behalf of the United States Government and placed on the National Register of Historic Places in 2001 (Yucha and Hammatt 2017).

### 3.1.6 Contemporary Land Use

Current land use patterns in Hāna, Maui reflect growing tourism and capital gains investment land tenure. In 2001, Meridian divided its assets, selling the hotel properties to Passport Resorts and the ranch properties (including 4,500 acres) to Hana Ranch Partners (HRP), a mainland investment group based in San Francisco and Montana. In 2009, Passport Resorts sold the hotel to Ohana Hotel (managed through Vermont based Arden Grove Hospitality. In 2010, the hotel was sold to Amstar (a Denver based real estate investment company) through its Denver based subsidiary Green Tea LLC which operates Travaasa Destinations group. Finally, in 2010, the Hotel Hana Maui was renamed Travaasa Hotel and since 2020 is now called Hana-Maui Resort.

In 2002, HRP sold 102 acres of coastal pastureland to Oprah Winfrey and Bob Green and converted 41 acres at Maka‘alae and 4 acres designated as Kakio I to conservation. In 2013, they sold the Hana Ranch facilities, including 3,600 acres of ranch land and two water supply companies to Bio-Logical Capital of Colorado. In 2014, HRP converted an additional 10 acres at Kakio II to conservation (www.savehanacoast.org).

## 3.2 **Previous Archaeological Research**

The earliest archaeological studies on the island of Maui were a part of island-wide surveys conducted in the early 1900s (Stokes 1917; Walker 1931). These studies tended to focus on producing descriptive lists of large-scale architecture or traditional ceremonial *heiau* sites. Archaeological studies occurred on a more frequent basis following the passage of the National Historic Preservation Act in 1966 and HRS §6E, which established the Historic Preservation Program in 1976.

Previous archaeological studies conducted in the immediate vicinity (approximately 600 m radius) of the project area include archaeological reconnaissance surveys, LRFI surveys, AIS investigations, and archaeological monitoring programs (Figure 13 and Table 4). Overall, previous archaeological research in the immediate vicinity of the project area document various historic properties including *heiau*, a human burial, and historic refuse pits and artifact scatters (Figure 14).

### 3.2.1 Walker (1931)

In 1928 and 1929, Walker (1931) conducted surveys of *heiau* on Maui and recorded four *heiau* in the vicinity of the current project area. Three of the sites were documented on the Keanini Point peninsula near the current project area: Walker Site 0105 (SIHP # 50-50-13-00105), Kaniomoku Heiau, Walker Site 0111 (SIHP # 50-50-13-00111) Honuaula Heiau, and Walker Site 0112 (SIHP # -00112) Kuawalu Heiau. Walker Site 0108 (SIHP # -00108) is an Unnamed Heiau on Nānu‘alele Point. The *heiau* were described by Walker (1931) as follows:

Walker Site 0105, Kaniomoku Heiau

> Location: The cane lands above the road.
>
> Description: Kaniomoku is mentioned by Thrum as the place where Kaahumanu spent her childhood. Her birthplace was in a large cave on the side of Kauiki Hill on the bay. The heiau has been totally destroyed. (Walker 1931:181)

Walker Site 0108, Unnamed Heiau

> Name: Unknown
>
> Location: On Keanini Point beyond the factory, 100 feet from the shore.
>
> Description: A small heiau probably of the Kuula class. It is little more than a level spot in the lava, 30 x 35 feet. The front is toward the bay, and a line of stones marks the edge of a step terrace. On the east a natural rock ledge forms a wall, and there are indications of a small terrace below it. The back is formed by a platform 3 feet high, 10 feet wide, and 35 feet long. A large part of the interior of the heiau is occupied by a double platform whose edges do not coincide with the edge of the terrace. It is likely a burial platform. Large pieces of Aa make up the terrace with beach stones used for the divisions. Few pieces of coral seen. (Walker 1931:183)

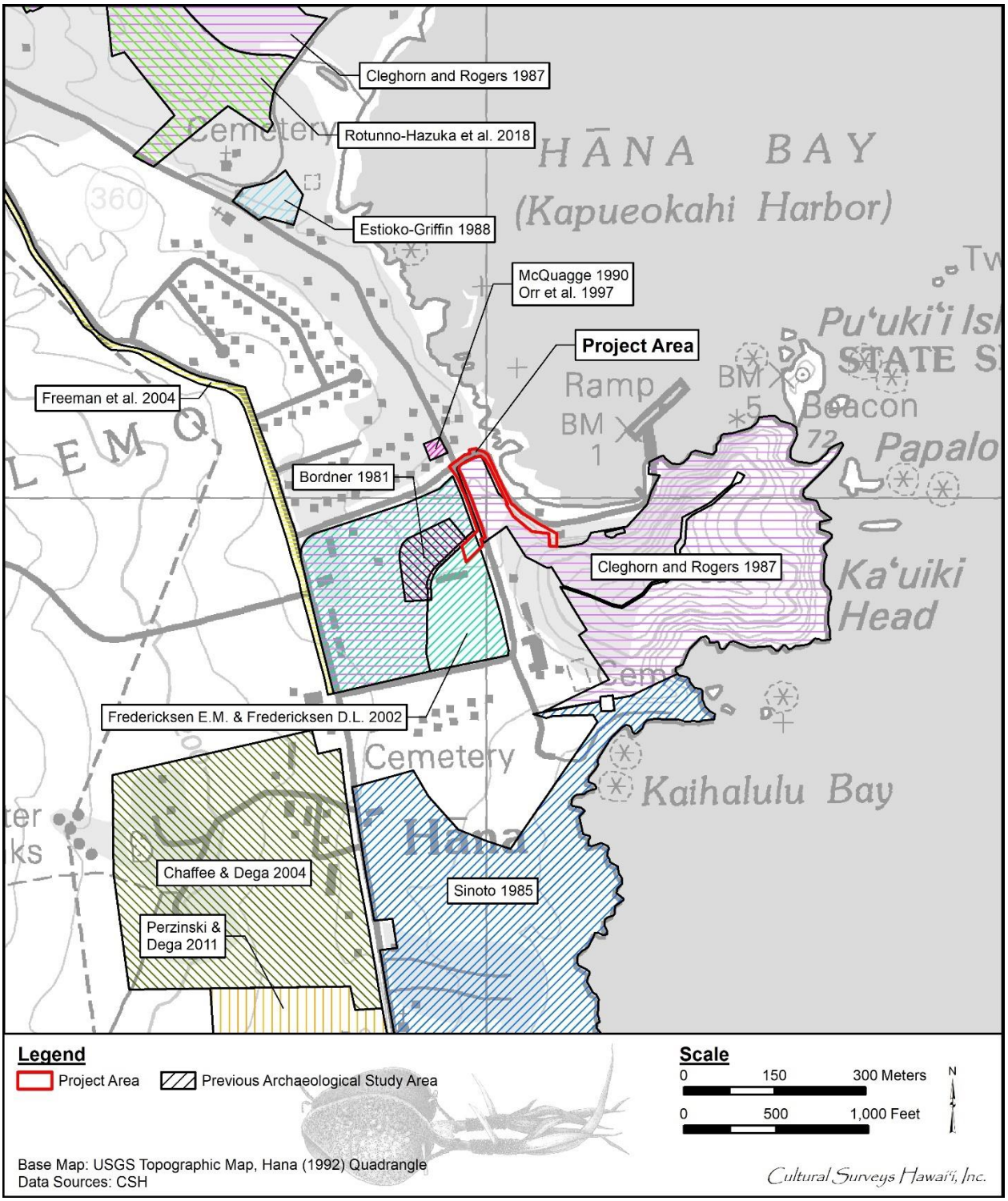


Figure 13. Portion of the 1992 Hana USGS 7.5-minute topographic quadrangle showing previous archaeological studies in the vicinity of the project area (U.S. Geological Survey 1992)

Table 4. Previous archaeological studies in the vicinity of the project area

| Reference | Type of Study | Location | Results (SIHP # 50-50-13) |
|---|---|---|---|
| Bordner (1981) | Archaeological reconnaissance and subsurface testing | Hotel Hana; TMK: [2] 1-4-004:022 | No historic properties identified |
| Sinoto (1985) | Archaeological reconnaissance survey | Hāna Ranch; TMKs: [2] 1-4-003:003 and [2] 1-4-004:016 and 017 | No historic properties identified |
| Cleghorn and Rogers (1987) | Preliminary archaeological and historical investigation | Hāna ranch lands | Recorded 48 archaeological sites; approximately 20 sites destroyed due to sugarcane cultivation; remaining sites appear disturbed to varying extents |
| Estioko-Griffin (1988) | Field inspection | Hāna Agricultural Park (Kalo Road), Kaeleku, Hana; TMKs: [2] 1-3-009:020, 021 | Inspected the entrance of a known lava tube (SIHP # -01813), but deemed unsafe to investigate the bottom |
| McQuagge (1990) | Archaeological subsurface testing | Hāna, Maui; TMKs: [2] 1-4-013:014, 015 | Encountered midden and historic artifacts from a previous dwelling; no SIHP number assigned |
| Orr et al. (1997) | Archaeological subsurface testing | Parcel adjacent to the Hana Cultural Center; TMKs: [2] 1-4-013:014, 015 | No historic properties identified |
| Fredericksen and Fredericksen (2002) | Archaeological monitoring | Hāna Ballpark, Wananalua; TMK: [2] 1-4-004:021 | Documented SIHP # -05190, a recently disturbed human burial, and traditional stone artifacts |
| Chaffee and Dega (2004) | AIS | Hāna Town Center, Wananalua; TMK: [2] 1-4-003:056 | Identified SIHP # -05546, historic refuse pit |
| Freeman et al. (2004) | Archaeological monitoring | Hāna Highway improvements, Huelo to Hana; TMKS: [2] 2-1-001, 002, 003, [2] 2-1-004:001-005, [2] 2-2-009:005, 006, 009, 010, 012, 013 | No historic properties identified |

| | | | |
|---|---|---|---|
| Perzinski and Dega (2011) | AIS | 10-acres in Hāna, Oloewa; TMK: [2] 1-4-003:009 (por.) | Identified SIHP # -06807, basalt cobble and boulder historic terrace |
| Rotunno-Hazuka et al. (2018) | AIS | 20-acre parcel, Kawaipapa; TMK: [2] 1-4-006:014 (por.) | Documented nine historic properties comprised of 70 possible features:<br>SIHP # -06069, a previously identified historic boundary wall;<br>SIHP # -07112, 13 features associated with historic to modern animal husbandry, agriculture, and habitation;<br>SIHP # -07113, historic boundary wall containing 11 features;<br>SIHP # -07114, 17 features associated with animal husbandry and agriculture;<br>SIHP # -07115, pre- to post-Contact multi-occupation site with seven features;<br>SIHP # -07116, possible historic to modern agricultural area with eight features;<br>SIHP # -07117, probable pre-Contact to historic habitation complex with seven features;<br>SIHP # -08316, pre-Contact to historic temporary habitation site with three features;<br>SIHP # -08317, a historic religious site with three features including a historic burial |

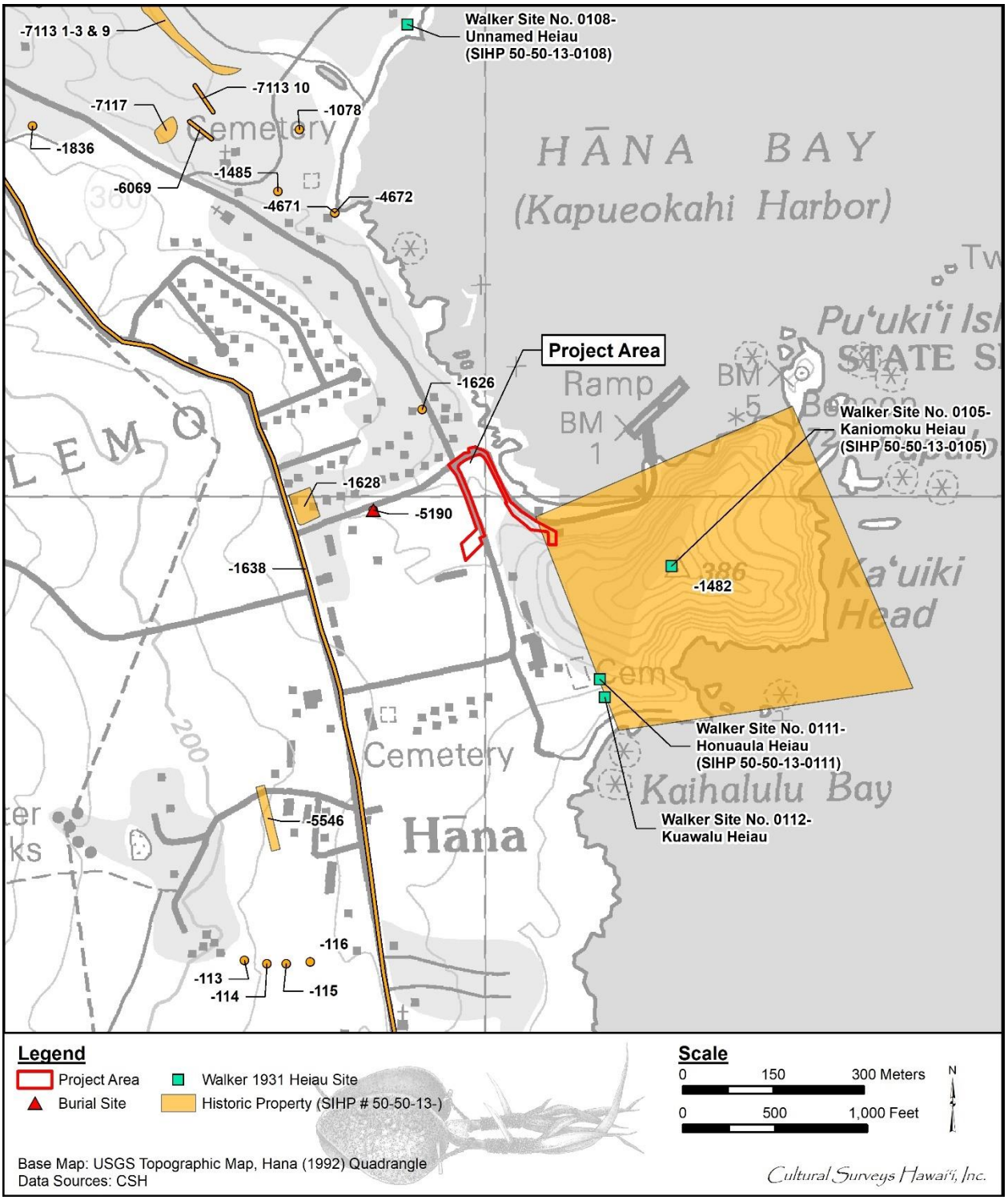


Figure 14. Portion of the 1992 Hana USGS 7.5-minute topographic quadrangle showing previously identified historic properties in the vicinity of the project area (U.S. Geological Survey 1992)

Walker Site 0111, Honuaula Heiau and Walker Site 0112 Kuawalu Heiau

Names: Honuaula, Kuawalu

Location: Base of Kauiki Hill

Description: Two war heiaus built by King Hua-a-Pohukaina of Lahaina sometime during the early part of the 12th Century. Thrum in his 1917 list speaks of Honuaula being built prior to the raid on Hawaii. On his successful return he built Kuawalu, said to have measured 70 x 120 feet. All traces of both are now destroyed. This is presumably the same King Hua that built the heiaus of Waiie and Luakona at Lahaina. He is referred to in legend as the infamous ruler who put his chief priest to death and himself died miserably of famine with all his people as a result. (Walker 1931:186)

### 3.2.2 Bordner (1981)

In 1981, the Environmental Impact Study Corp. (EISC) conducted an archaeological reconnaissance survey with subsurface testing for a proposed expansion of the Hotel Hana-Maui (Bordner 1981). The study area was located immediately west of the southwestern portion of the current project area. Bordner (1981) noted that the area was in use as a miniature golf course and plant nursery. While the location and depth of the excavations are not provided in the report, subsurface testing in the study area documented a dark-stained clay layer with limited topsoil formation. No historic properties were identified. Bordner (1981) recommended no further work based on extensive recent land modifications for sugarcane cultivation and the golf course.

### 3.2.3 Sinoto (1985)

On 21 September 1985, the Bishop Museum conducted an archaeological reconnaissance survey of Hāna ranch lands (TMKs: [2] 1-4-003:003 and [2] 1-4-004:016 and 017) for the development of garden cottages on the property (Sinoto 1985). SIHP # 50-50-13-01482, Ka‘uiki Hill, is located directly northwest of the survey area. Due to the significance of the historic property, archaeologists conducted a survey to identify possible surface sites. No historic properties were identified.

### 3.2.4 Cleghorn and Rogers (1987)

In 1987, the Bernice Pauahi Bishop Museum (Cleghorn and Rogers 1987) conducted preliminary historical and archaeological investigations of Hāna Ranch lands within a portion of the current project area. The study reported that 48 archaeological sites had been previously recorded within the ranch lands, primarily *heiau* structures, but 20 have been destroyed likely because of sugarcane cultivation. The previously identified sites includes SIHP # -01482, Ka‘uiki Hill, which is shown as the entire peninsula on Figure 14, including a portion of the current project area. Aerial images were referenced to locate and field reference an additional 16 sites during the study, which were noted as having probably agricultural or habitation functions.

No archaeological sites were identified in the current project area during the study. Among several general recommendations, the 1987 study recommended that all ranch lands be surveyed, all archaeological sites be recorded, and selected sites should be excavated to provide important information on site function and settlement chronology.

### 3.2.5 Estioko-Griffin (1988)

On 11 November 1988, the Department of Land and Natural Resources (DLNR) conducted a field inspection of SIHP # 50-50-13-1813, a lava tube, in Kaeleku, Hāna (TMK: [2] 1-3-09:20 and 21) (Estioko-Griffin 1988). The landowner had requested the inspection and noted an interest in opening the cave to the public. The area had extensive previous disturbance from sugarcane cultivation. Entry into the bottom of the lava tube was deemed unsafe by the current means of a rope and hog-wire fencing tied to a tree. Besides litter and likely cow bones, no structures were visible at the bottom. The archaeologists recommended a more detailed study of the interior prior to opening the cave to the public.

### 3.2.6 McQuagge (1990)

In 1990, Richard L. McQuagge conducted an archaeological investigation for the Hāna Cultural Center (HCC) traditional Hawaiian house replica construction (TMKs: [2] 1-4-013:014 and 015) (McQuagge 1990). A house had once stood in the eastern portion of the property. Nine test pits, each 1-x-1 m square, were hand excavated (Pit #s 1–9). Surface *‘opihi* (limpets) and cowry middens, faunal remains, and historic artifacts were identified. Pit # 7 contained a rubbish pit, and the excavation area was expanded to further investigate the extent and contents. The rubbish pit contained a large majority of oriental artifacts such as rice bowls and medicine bottles. Pit # 8 contained a solid layer of intact glass bottles from the 1940s and 1950s. No historic properties were designated. Archaeological monitoring was recommended for future ground disturbance.

### 3.2.7 Orr et al. (1997)

From 24 June through 26 June 1995, CSH conducted an archaeological survey with subsurface testing of two parcels (TMKs: [2] 1-4-013:014 and 015) that adjoin the property of the HCC Museum (Orr et al. 1997). An amorphous rectangular stone mound located beneath a *ti* hedge was identified as possibly containing a burial, which was supported by testimony from a local resident. The HCC agreed to preserve and maintain the location. A total of four trenches (Trench 1, 3, 4, and 5) three shovel tests (Shovel Test 1–Shovel Test 3), and five test units (Test Unit 1–Test Unit 5) were excavated around the property. Post-WWII materials were recorded. No evidence of prehistoric Hawaiian occupation was encountered, and no historic properties were identified during subsurface testing.

### 3.2.8 Fredericksen and Fredericksen (2002)

In January and February 2002, Xamanek Researches conducted archaeological monitoring for lighting installation at the Hāna Ballpark following the discovery of a human burial (Fredericksen and Fredericksen 2002). The burial had been inadvertently disturbed during a lighting excavation in December 2001. The SHPD had been notified of the find and an archaeologist was contracted to fulfill an archaeological monitoring program. The burial was assessed as previously *in situ* and designated as SIHP # 50-50-13-05190. The burial was preserved in place beneath a concrete cap.

The study area is in the southwestern portion of the current project area. Project related ground disturbance included four light pole footing excavations and an electrical trench. Further monitoring of the excavations encountered several traditional and historic artifacts including a hammerstone, a hammerstone/chopper, and a pecking stone.

### 3.2.9 Chaffee and Dega (2004)

On 16 and 17 December 2003, Scientific Consultant Services, Inc. (SCS) conducted an AIS of approximately 37 acres for the Hāna Town Center (TMK: [2] 1-4-003:056) (Chaffee and Dega 2004). Seven backhoe trenches (Stratigraphic Trenches [ST]-1 through ST-7) were excavated in two general locations within the project area. A historic-era refuse pit (SIHP # 50-50-13-05546) was present in ST-4 and ST-5. The contents primarily consisted of bottle glass. Archaeological monitoring was recommended.

### 3.2.10 Freeman et al. (2004)

From June through August 2004, CSH conducted archaeological monitoring in three locations for the Hāna Highway Improvements between Huelo, Makawao District, and Hāna (TMKs: [2] 2-1-001, -002, -003, [2] 2-1-004:001–005, [2] 2-2-009:005, 006, 009, 010, 012, 013) (Freeman et al. 2004). Construction involved excavations of the roadway and gutters. Improvements have occurred at these locations on a continual basis due to rainfall erosion. No historic properties were identified.

### 3.2.11 Perzinski and Dega (2011)

On 21 October 2010, SCS conducted an AIS of approximately 10 acres in Hāna (TMK: [1] 1-3-004:009) for the construction of a senior housing project (Perzinski and Dega 2011). SIHP # 50-50-13-06807 was identified as a historic terrace constructed of basalt cobbles and boulders in the northwestern corner of the project area.

### 3.2.12 Rotunno-Hazuka et al. (2018)

In 2018, Archeological Services Hawaii, LLC. (ASH) conducted an AIS for an agriculturally zoned parcel on Kawaipapa (Rotunno-Hazuka et al. 2018). Nine historic properties with 70 possible component features were documented, including one previously identified historic property, SIHP # 50-50-13-06069, a historic boundary wall. Historic burials represented 2% of the total finds. The newly identified historic properties were assessed as follows:

1. SIHP # -07112, 13 features associated with historic to modern animal husbandry, agriculture, and habitation,
2. SIHP # -07113, historic boundary wall containing 11 features,
3. SIHP # -07114, 17 features associated with animal husbandry and agriculture,
4. SIHP # -07115, pre- to post-Contact multi-occupation site with seven features,
5. SIHP # -07116, possible historic to modern agricultural area with eight features,
6. SIHP # -07117, probable pre-Contact to historic habitation complex with seven features,
7. SIHP # -08316, pre-Contact to historic temporary habitation site with three features, and
8. SIHP # -08317, a historic religious site with three features including a historic burial.

# Section 4 Results of Fieldwork

Fieldwork conducted as part of this LRFI included archaeological observation of minimally invasive geotechnical testing in 2020 as well as a pedestrian inspection of the project area and a non-invasive GPR survey of representative portions of the project area in 2022. This fieldwork provided information on the presence/absence of historic properties on the surface of the project area as well as a preliminary assessment of stratigraphy and the potential for subsurface historic properties.

On 14 and 15 December 2020, CSH observed geotechnical boring operations conducted by Hirata and Associates, Inc. at eight locations (Bore [B]-1 through -8). Observation of the geotechnical boring provided documentation of the general types and variation of stratigraphy within the project area, which included alluvial loams, silts, and clays, basalt bedrock, and marine sand deposits. A summary of the results of archaeological observation of geotechnical boring is provided in Section 4.1.

The field inspection of the project area was accomplished on 29 June 2022. The field inspection consisted of a 100% pedestrian survey of the project area. No historic properties were identified within the project area, however, CSH observed retaining walls along portions of Uakea Road and Keawa Place that are likely more than 50 years old and outside of the project area. CSH also observed a mortared basalt and formed concrete drainage channel along the southern edge of Keawa Place that appears to be less than 50 years old based on construction style. The retaining walls located outside the project area and the modern drainage channel located partially within the project area were photographed by CSH and a full description of the results of the pedestrian inspection is provided in Section 4.2.

A GPR survey of three locations within or near the project area was also accomplished on 29 June 2022 as an attempt to provide additional information on subsurface deposits and the potential for GPR anomalies. No GPR anomalies were identified in Grids #s 1 and 3. A linear anomaly was identified within Grid # 2 at 1.0 m below surface. A full description of the results of the GPR survey is provided in Section 4.3.

## 4.1 Geotechnical Boring

The eight bore holes (B-1 through B-8) were drilled to a targeted depth between 1 to 3 m (3.3 to 9.8 ft). The bore holes were approximately 7.0 cm in diameter and completed with a truck-mounted direct-push drilling probe. B-2 through B-8 were within the current project area boundaries, while B-1 was southwest of the alignment (Figure 15). The archaeologist watched as the machine drilled each bore hole and inspected the backdirt and sediment as Hirata and Associates personnel conducted percolation tests and removed column samples at several intervals for collection. Percolation tests are done to determine the water absorption rate of the soil for the septic system design. The sediment samples typically originated from depth intervals of 0.3 to 0.7 m (1.0 to 2.5 ft), 0.9 m (3.0 ft), 1.5 m (5.0 ft), and 2.7 m (9.0 ft). Each column sample was photographed.

Stratigraphic profiles were not recorded due to the small size of the bore hole, such that the underlying stratigraphy was not visible to produce an accurate profile map. No samples were collected by the archaeologist. No cultural materials were observed among the test bores.

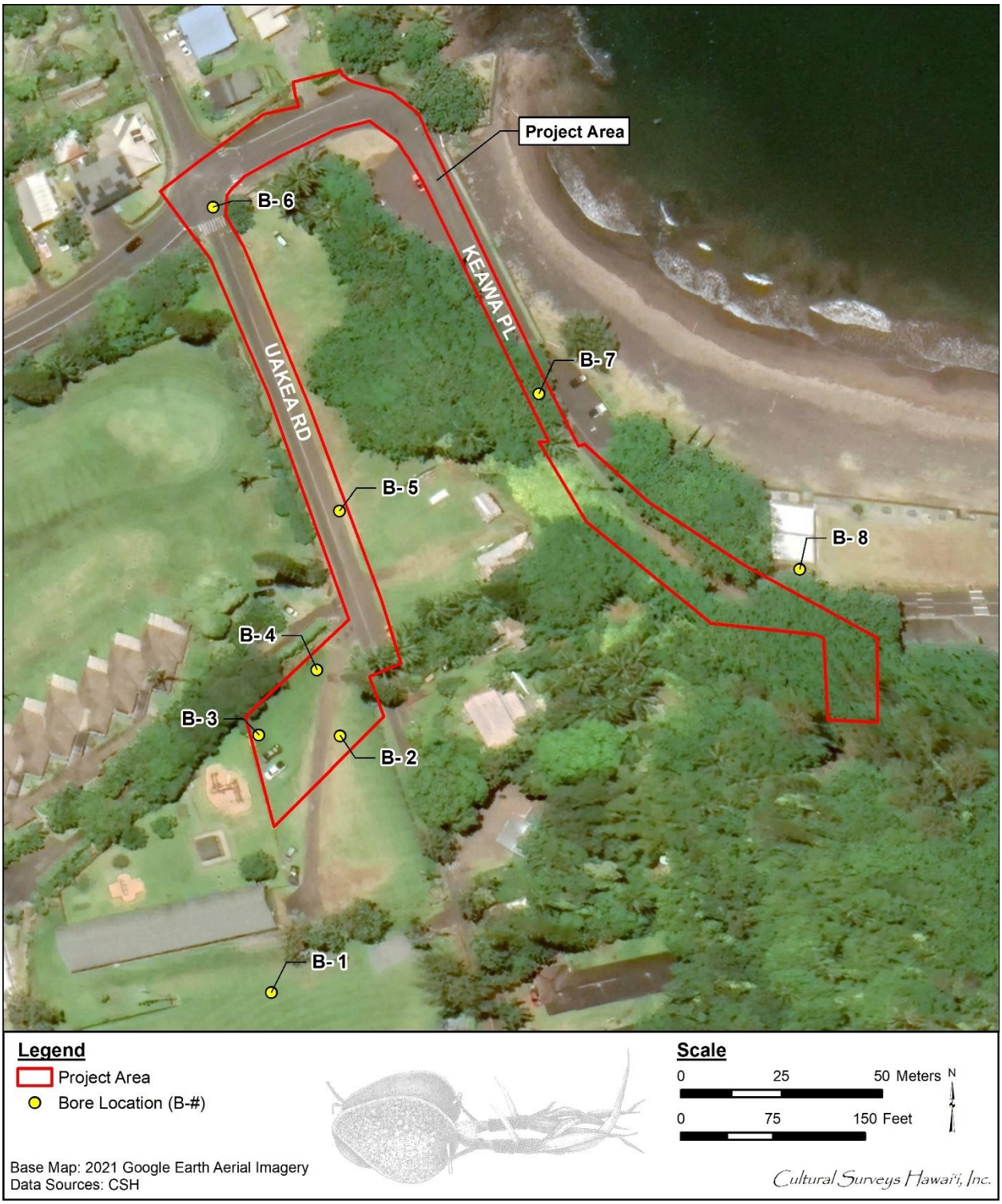


Figure 15. Esri (2018) aerial image showing the eight geological test bore locations (B-1 through B-8)

Observation of the geotechnical boring provided documentation of the general types and variation of stratigraphy within the project area, which includes alluvial loams, silts, and clays, basalt bedrock, and marine sand deposits.

#### 4.1.1 Test Bore 1 (B-1)

B-1 is in the right-center field of the Hāna Ballpark, on the southern side of the Kamehameha Hāna Preschool, and southwest of the current project area limits (Figure 16). A percolation test was conducted and only one soil sample was collected from the base of excavation at 1.5 m (5.0 ft) (Figure 17). The observed soil consisted of brown silty clay loam.

#### 4.1.2 Test Bore 2 (B-2)

B-2 is on the western side of the Kamehameha Hāna Preschool driveway, in the southwestern portion of the project area (Figure 18). A percolation test was conducted and only one soil sample was collected from the base of excavation at 1.5 m (5.0 ft) (Figure 19). The observed soil consisted of brown silty clay loam.

#### 4.1.3 Test Bore 3 (B-3)

B-3 is in the parking area on the western side of the Kamehameha Hāna Preschool driveway, in the southwestern portion of the project area (Figure 20). Four soil samples were collected from the test bore. Sample 1 was collected at approximately 0.3 to 0.7 m (1.0 to 2.5 ft) and consisted of silty clay loam. Sample 2 was collected at 0.9 m (3.0 ft) and consisted of silty clay loam (Figure 21). Sample 3 was collected at 1.5 m (5.0 ft) and consisted of crushed cinder (Figure 22). Sample 4 was collected at 2.7 m (9.0 ft) and consisted of silty clay (Figure 23).

#### 4.1.4 Test Bore 4 (B-4)

B-4 is near the entrance on the western side of the Kamehameha Hāna Preschool driveway, in the southwestern portion of the project area (Figure 24). A percolation test was conducted and only one soil sample was collected from the base of excavation at 1.5 m (5.0 ft) (Figure 25). The observed soil consisted of brown silty clay loam.

#### 4.1.5 Test Bore 5 (B-5)

B-5 is in the easement along the *makai* (eastern) side of Uakea Road in the southwestern portion of the project area (Figure 26). Three soil samples were collected from the test bore. Sample 1 was collected at approximately 0.3 to 0.7 m (1.0 to 2.5 ft) and consisted of silty clay loam (Figure 27). Sample 2 was collected at 0.9 m (3.0 ft) and consisted of decomposed basalt mixed with silty clay loam (Figure 28). Sample 3 was collected at 1.5 m (5.0 ft) and consisted of decomposed basalt mixed with silty clay loam (Figure 29).

Figure 16. Overview of the truck-mounted direct-push drilling probe at B-1, located outside of the project area on the southern side of the Kamehameha Hāna Preschool, view to north

Figure 17. B-1 at the completion of drilling, view to east

Figure 18. Overview of the truck-mounted direct-push drilling probe at B-2, located on the western side of the Kamehameha Hāna Preschool driveway, view to southeast

Figure 19. B-2 at the completion of drilling, view to southeast

Figure 20. Overview of the truck-mounted direct-push drilling probe at B-3, located northeast of the Kamehameha Hāna Preschool, view to south

Figure 21. Overview of B-3 Sample 2, silty clay loam, view to east

Figure 22. Overview of B-3 Sample 3, crushed cinder, view to east

Figure 23. Overview of B-3 Sample 4, silty clay, view to east

Figure 24. Overview of the truck-mounted direct-push drilling probe at B-4 near the Kamehameha Hāna Preschool driveway entrance, view to southeast

Figure 25. Close-up of B-4 percolation test, view to northeast

Figure 26. Overview of the truck-mounted direct-push drilling probe at B-5, located on the eastern side of Uakea Road, view to south

Figure 27. Overview of B-5 Sample 1, silty clay loam, view to north

Figure 28. Overview of B-5 Sample 2, decomposed basalt mixed with silty clay loam, view to north

Figure 29. Overview of B-5 Sample 3, decomposed basalt mixed with silty clay loam, view to north

### 4.1.6 Test Bore 6 (B-6)

B-6 is within the intersection of Uakea Road and Keawa Place in the northwestern corner of the project area (Figure 30). Three soil samples were collected from the test bore, and the crew encountered bedrock before a fourth sample could be taken. Sample 1 was collected at approximately 0.3 to 0.7 m (1.0 to 2.5 ft) and consisted of gravelly silty clay loam (Figure 32). Sample 2 was collected at 0.9 m (3.0 ft) and consisted of gravelly silty clay loam (Figure 33). Sample 3 was collected at 1.5 m (5.0 ft) and consisted of decomposed basalt mixed with silty clay loam (Figure 34).

### 4.1.7 Test Bore 7 (B-7)

B-7 is on the *makai* (eastern) side of Keawa Place toward the entrance of Hāna Bay in the eastern portion of the project area (Figure 35). Two soil samples were collected from the test bore. Sample 1 was collected at approximately 0.3 to 0.7 m (1.0 to 2.5 ft) and consisted of an aggregate mixture of sand and decomposed bedrock. Sample 2 was collected at 0.9 m (3.0 ft) and consisted of a core of solid bedrock (Figure 36).

### 4.1.8 Test Bore 8 (B-8)

B-8 is on the *mauka* (western) side of Keawa Place, directly north of Helene Hall, in the southeastern portion of the project area (Figure 37). Four soil samples were collected from the test bore. Sample 1 was collected at approximately 0.3 to 0.7 m (1.0 to 2.5 ft) and consisted of black beach sand (Figure 38). Sample 2 was collected at 0.9 m (3.0 ft) and consisted of black beach sand (Figure 39). Sample 3 was collected at 1.5 m (5.0 ft) and consisted of black beach sand (Figure 40). Sample 4 was collected at 2.7 m (9.0 ft) and consisted of black beach sand mixed with coral (Figure 41).

Figure 30. Overview of B-6 general location at the intersection of Uakea Road and Keawa Place, view to southeast

Figure 31. Close-up of exact location of B-6 in the intersection of Uakea Road and Keawa Place, view to southeast

Figure 32. Overview of B-6 Sample 1, view to east

Figure 33. Overview of B-6 Sample 2, view to east

Figure 34. Overview of B-6 Sample 3, view to east

Figure 35. Overview of the truck-mounted direct-push drilling probe at B-7 within the eastern side of Keawa Place at Hāna Bay, view to southeast

Figure 36. Overview of B-7 Sample 2, bedrock, view to south

Figure 37. Overview of the truck-mounted direct-push drilling probe at B-8, located north of Helene Hall, view to east

Figure 38. Overview of B-8 Sample 1, view to west

Figure 39. Overview of B-8 Sample 2, view to west

Figure 40. Overview of B-8 Sample 3, view to west

Figure 41. Overview of B-8 Sample 4, view to west

## 4.2 **Pedestrian Inspection Results**

The field inspection of the project area was accomplished on 29 June 2022. The field inspection consisted of a 100% pedestrian survey of the project area. The majority of the surface of the project area consisted of asphalt-paved road surfaces. The margins of the roads included mowed grass lawns. The upslope area above Keawa Place was overgrown in parts by various tall grasses and shrubs. Overall, ground visibility was good to excellent.

No historic properties were identified within the project area. The negative results of the current field inspection are consistent with the results of previous archaeological studies within the project area (Cleghorn and Rogers 1987; Fredericksen and Fredericksen 2002).

While no historic properties were observed within the current project area, CSH observed potential historic properties located near, but outside the current project area. These include a stacked stoned retaining wall that extends along the western edge of Uakea Road and a substantial, multi-tiered stacked stone and mortared basalt retaining wall along the western edge of the lower portion of Keawa Place. The stacked stoned retaining wall along Uakea Road appears to be a property boundary (Figure 42 and Figure 43). The multi-tiered retaining wall along Keawa Place appears to be related to a former plantation railroad alignment (see Figure 8, Figure 44, and Figure 45). No further documentation of these potential historic properties was conducted by CSH since they are believed to be outside of the current project area and therefore will not be affected by project-related ground disturbance.

CSH also inspected and photographed a mortared basalt and formed concrete drainage channel along the southern edge of Keawa Place that appears to be less than 50 years old based on construction style (Figure 46 and Figure 47). The drainage channel is only present along Keawa Place and was likely constructed to mitigate flooding and drainage entering into Hāna Bay. The drainage channel does not appear on historic maps and is not associated with a former stream. No further documentation of the drainage channel was conducted by CSH of this modern structure.

Figure 42. General view of the stacked stone retaining wall located along the western edge of Uakea Road and outside of the current project area, view to south

Figure 43. Close-up view of the stacked stone retaining wall located along the western edge of Uakea Road that is located outside of the current project area, view to west

Figure 44. General view of the multi-tiered stacked stone and mortared basalt retaining wall located along the western edge of the lower portion of Keawa Place and outside the current project area, view to southwest

Figure 45. Close-up view of the multi-tiered stacked stone and mortared basalt retaining wall located along the western edge of the lower portion of Keawa Place and outside the current project area, view to west

Figure 46. General view of drainage channel located along the southern edge of Keawa Place (at left) that is believed to be less than 50 years old, view to northeast

Figure 47. Close-up view of drainage channel located along the southern edge of Keawa Place (at right) at the intersection of Uakea Road, view to northeast\

## 4.3 Ground Penetrating Radar

A GPR survey of three locations within or near the project area was also accomplished on 29 June 2022 as an attempt to provide additional information on subsurface deposits and the potential for GPR anomalies. Portions of the project area that were available for GPR survey were limited since the majority of the project area is located within active roadways. The GPR survey included two survey areas (Grid 2 and Grid 3) within the mowed lawn area in the southwestern end of the project area and one survey area (Grid 1) adjacent to the intersection of Keawa Place and Uakea Road outside of the current project area. No GPR anomalies were identified in Grids 1 and 3. A linear anomaly was identified within Grid # 2 at 1.0 m below surface.

### 4.3.1 GPR Grid 1

GPR Grid 1 was placed adjacent to the intersection of Keawa Place and Uakea Road but outside of the current project area (Figure 48 and Figure 49). Grid 1 measured 3.5 m (x-axis) by 7.0 m (y-axis). The GPR identified a consistent reflection pattern that is likely evidence of homogenous sediment (Figure 50). No GPR anomalies were identified within Grid 1.

### 4.3.2 GPR Grid 2

GPR 2 was placed in the mowed lawn area in the southwestern end of the project area bordered by an access road to the northeast and a fenced playground area to west (see Figure 48 and Figure 51). Grid 2 measured 6.5 m (x-axis) by 18 m (y-axis). The GPR identified a linear anomaly that extends roughly east to west at a depth of 1.0 m below surface (Figure 52 and Figure 53). A profile view of the reflection indicates the presence of a possibly overlying backfilled excavation. It is possible that this linear anomaly is the reflection of a buried utility line that extends through the property, though there are no indications on the surface of a utility line corridor.

### 4.3.3 GPR Grid 3

GPR 3 was placed in the mowed lawn area in the southwestern end of the project area adjacent to the edge of Uakea Road (see Figure 48 and Figure 54). Grid 3 measured 3.0 m (x-axis) by 5.0 m (y-axis). The GPR identified a consistent reflection pattern that is likely evidence of homogenous sediment (Figure 55). No GPR anomalies were identified within Grid 3.

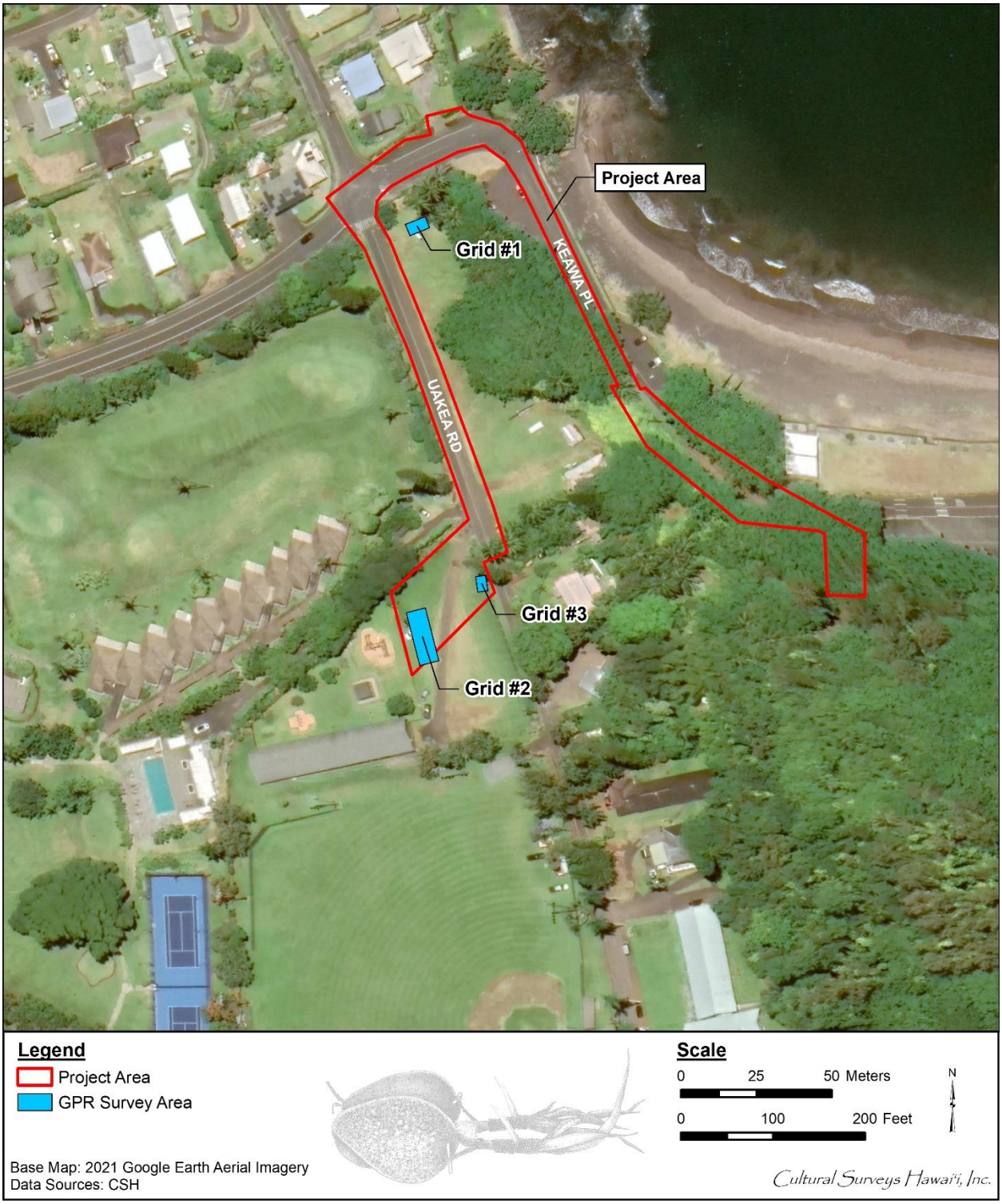


Figure 48. 2021 aerial photograph depicting the location of GPR survey areas within and adjacent to the current project area

Figure 49. General view of the location of GPR Grid 1, view to east

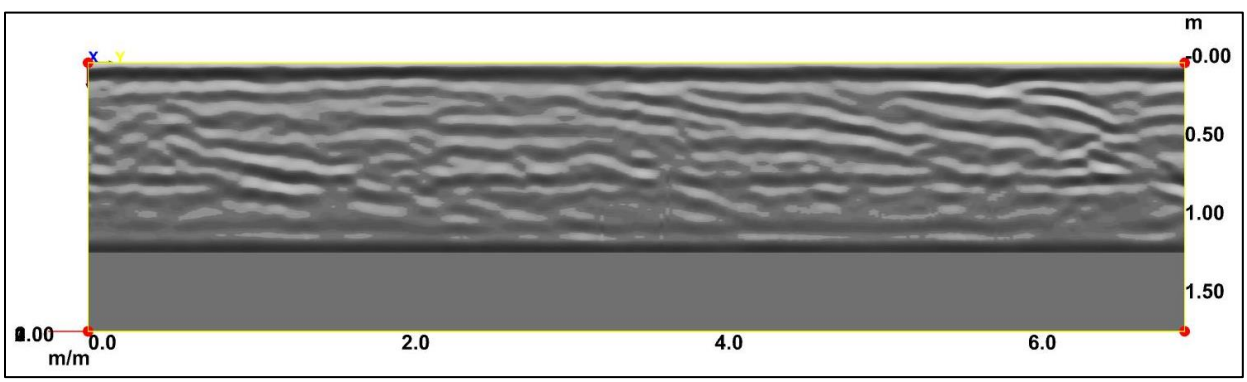


Figure 50. GPR Grid 1 reflection profile depicting a consistent reflection pattern that is likely evidence of homogenous sediment

Figure 51. General view of the location of GPR Grid 2, view to southwest

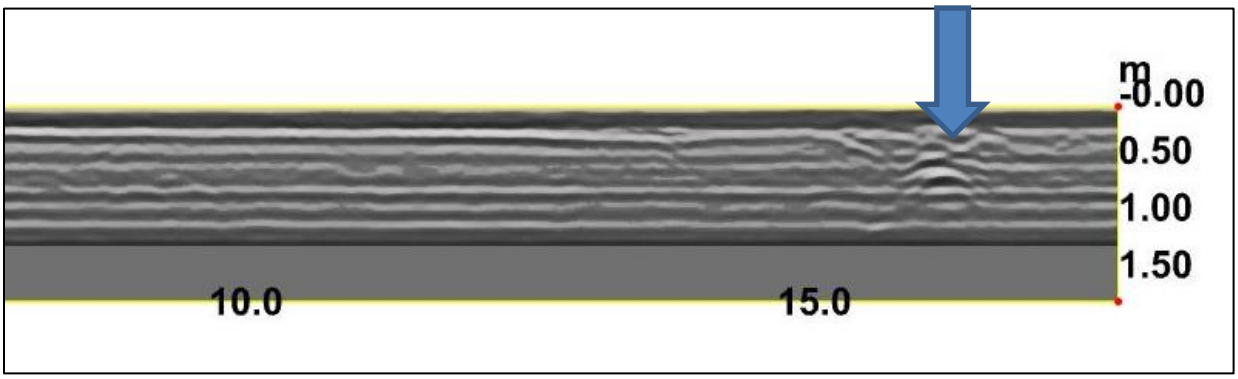


Figure 52. GPR Grid 2 reflection profile showing the profile view of a linear anomaly with a possible associated backfilled excavation (blue arrow)

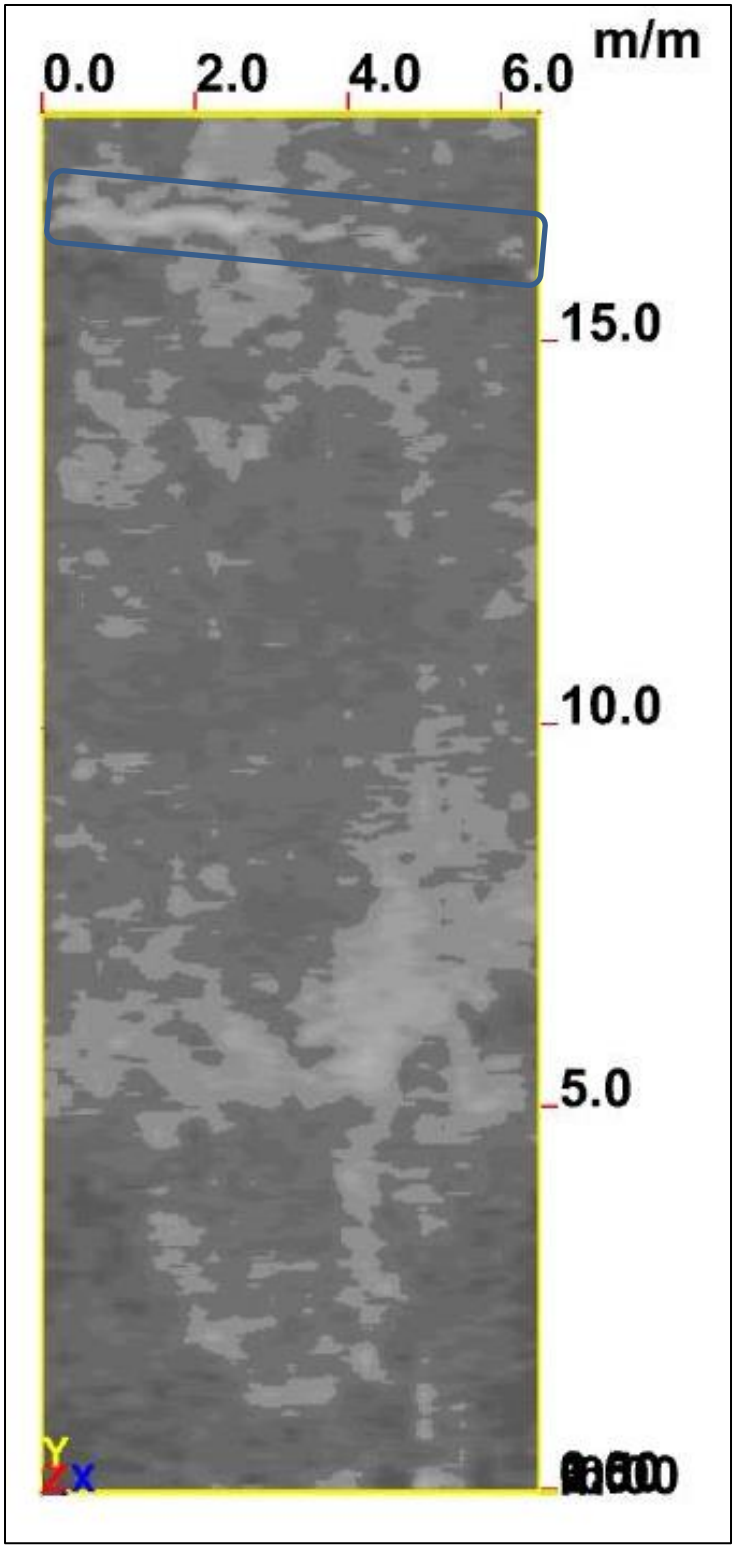


Figure 53. GPR Grid 2 reflection plan view at 1.0 m below surface depicting a linear anomaly (blue box)

Figure 54. General view of the location of GPR Grid 3, view to east

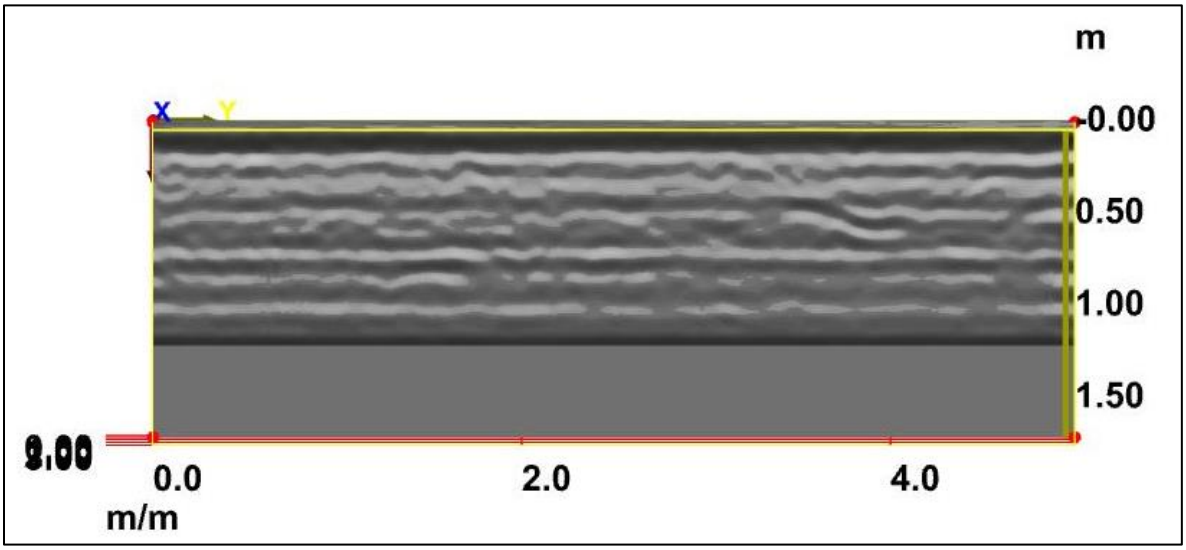


Figure 55. GPR Grid 3 reflection profile depicting a consistent reflection pattern that is likely evidence of homogenous sediment

# Section 5 Summary and Recommendations

At the request of Munekiyo Hiraga and on behalf of the County of Maui WWRD, CSH has prepared this LRFI report for the Helene Hall Septic System Improvements Project. Fieldwork related to this project included archaeological observation of geotechnical boring from December 14 to December 15, 2020 as well as pedestrian inspection and GPR survey on 29 June 2022 In total, this is work required approximately five person-days to complete.

Background research suggests that pre-Contact battles may have been fought within this region of Hana. During the early historic period, while much of the surrounding lands were being used for commercial sugarcane, coffee, and rubber production. The second half of the nineteenth century was marked by commercial development of sugar plantations in the area.

A review of previous archaeological studies in the immediate vicinity of the project area indicates that Fredericksen and Fredericksen (2002) recorded one burial (SIHP # -5190) outside of the current project area to the west. In 1987, the Bernice Pauahi Bishop Museum (Cleghorn and Rogers 1987) conducted archaeological investigations within a portion of the current project area and identified 48 archaeological sites, primarily *heiau* structures, but 20 have been destroyed likely because of sugarcane cultivation. None of these historic properties were identified within the current project area.

Fieldwork conducted as part of this LRFI included archaeological observation of minimally invasive geotechnical testing in 2020 as well as a pedestrian inspection of the project area and a non-invasive GPR survey of representative portions of the project area in 2022.

Observation of the geotechnical boring provided documentation of the general types and variation of stratigraphy within the project area, which alluvial loams, silts, and clays, basalt bedrock, and marine sand deposits.

No historic properties were identified within the project area during the field inspection, however, CSH observed retaining walls along portions of Uakea Road and Keawa Place that are likely more than 50 years old and outside of the project area. CSH also observed a mortared basalt and formed concrete drainage channel along the southern edge of Keawa Place that appears to be less than 50 years old based on construction style. The negative results of the current field inspection are consistent with the results of previous archaeological studies within the project area (Cleghorn and Rogers 1987; Fredericksen and Fredericksen 2002).

A GPR survey of three locations within or near the project area identified one linear anomaly within Grid # 2 at 1.0 m below surface that may also be associated with an overlying backfilled excavation. It is possible that this linear anomaly is the reflection of a buried utility line that extends through the property, though there are no indications on the surface of a utility line corridor.

The County of Maui requests SHPD reconsideration of the request for an AIS and instead proposes that the project proceed with archaeological monitoring for identification purposes under the provisions of a project-specific AMP. Consultation with the SHPD is recommended to determine appropriate historic preservation requirements for this project.

# Section 6 References Cited

Alexander, W.D.

1890 A Brief History of Land Titles in the Hawaiian Kingdom. In *Hawaiian Almanac and Annual for 1891: A Hand Book of Information on Interesting Matters Relating to the Hawaiian Islands*, Vol Seventeen, edited by Thos. G. Thrum, pp. 105-124. Press Publishing Company Print, Honolulu.

Beckwith, Martha W.

1970 *Hawaiian Mythology*. University of Hawai‘i Press, Honolulu.

Bishop, S.E.

1861 *Report to the Board of Sandwich Islands Mission*. Hawaiian Mission Children's Society, Honolulu, Hawai‘i.

Bordner, Richard

1981 *Archaeological Reconnaissance and Subsurface Testing, Hotel Hana-Maui Expansion (TMK 1-4-04:22)*. Copies available from Environmental Impact Study Corp., Wananalua, Hawai‘i.

Borthwick, Douglas, Jennifer Robbins, and William H. Folk

1992 *Archaeological Inventory Survey and Subsurface Testing for the Proposed Hana Ranch County Club, Hana Maui, Hawaii (TMK: 1-4-07:4, 6; 1-4-02:8, 9, 10, and 1-4-03:9)*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Chaffee, David B., and Michael F. Dega

2004 *Hāna Town Center Project Inventory Survey Wananalua Ahupua‘a, Hāna District, Hāna, Maui Island Hawai‘i [TMK: 1-4-03: 056]*. Copies available from Inc. Scientific Consultant Services, Honolulu.

Chinen, Jon J.

1958 *The Great Mahele: Hawaii's Land Division of 1848*. University of Hawai‘i Press, Honolulu.

Cleghorn, Paul L., and Kathie Rogers

1987 *Preliminary Historical and Archaeological Investigations of Hāna Ranch Lands, Maui, Hawaiian Islands*. Bernice Pauahi Bishop Museum, Honolulu.

Condé, Jesse C., and Gerald M. Best

1973 *Sugar Trains: Narrow Gauge Rails of Hawaii*. Glenwood Publishers, Felton, California.

Cordy, Ross

2000 *Exalted Sits the Chief*. Mutual Publishing, Honolulu.

Daily Honolulu Press.

1883 Reminiscenses of Honolulu. *Daily Honolulu Press* Saturday 10 February:1. Honolulu, Hawai‘i.

Daws, Gavan

1968 *Shoal of Time: A History of the Hawaiian Islands*. University of Hawai‘i Press, Honolulu, Hawai‘i

Duensing, Dawn E.

2001 *National Register of Historic Places Registration Form: Hana Belt Road*. National Park Service, United States Department of the Interior, Hawai‘i

2005 *Historic American Engineering Record: Hana Belt Road*. National Park Service, United States Department of the Interior, Washington, D.C.

Esri, Inc.

2018 *Map Image Layer*. Satellite and aerial imagery for ArcGIS; Raster. Esri, Inc. Redlands, California.

Estioko-Griffin, Agnes

1988 *Field Inspection of Site 50-13-1813, Lava Tube, Kaeleku, Hana Maui TMK 1-3-09:20, 21*. State of Hawai‘i Department of Land and Natural Resources, State Historic Preservation Division, Honolulu, Hawai‘i.

Foote, Donald E., Elmer L. Hill, Sakuichi Nakamura, and Floyd Stephens

1972 *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. Soil Conservation Service, United States Department of Agriculture, Washington, D.C.

Fornander, Abraham

1880 *An Account of the Polynesian Race, its Origins and Migrations, and the Ancient History of the Hawaiian People to the Times of Kamehameha I*. 6 vols. Trubner & Co., London.

1919 *Fornander Collection of Hawaiian Antiquities and Folk-Lore: The Hawaiians' Account of the Formation of Their Islands and Origin of Their Race, with the Traditions of Their Migrations, Etc., as Gathered from Original Sources. Second Series.* Memoirs of the Bernice Pauahi Bishop Museum of Polynesian Ethnology and Natural History. Bishop Museum Press, Honolulu.

1969 *An Account of the Polynesian Race: Its Origins and Migrations*. Charles Tuttle, Rutland, Vermont.

Fredericksen, Erik M.

2015 *An Archaeological Monitoring Plan for the Hana Ball Park Restroom Septic System Improvements for the Existing Wastewater System, County Job No: P13/017, TMK: (2) 1-4-004:021 (Portion)*. Submitted to Xamanek Researches, LLC, Pukalanu, Maui.

Fredericksen, Erik M., and Demaris L. Fredericksen

2002 *Archaeological Monitoring Report for the Lighting Installation Project for the Hana Ballpark, Wananalua Ahupua‘a, Hana District, Island of Maui (TMK: 1-4-04: 21)*. Submitted to Xamanek Researches, Pukalani, Hawai`i.

Freeman, Sallie D.M., Holly Formolo, and Hallett H. Hammatt

2004 *An Archaeological Monitoring Report for Hāna Highway Improvements Huelo to Hāna, M.P. 4.20 to 23.70 Districts of Makawao (Hāmākualoa and Ko'olau) and Hana, Island of Maui (TMK: 2-1-1; 2-1-2; 2-1-3; 2-1-4;01-05; and 2-2-9:05, 06, 09, 10, 12, 13)*. Cultural Surveys Hawai'i, Inc., Wailuku, Hawai'i.

Giambelluca, Thomas W., Q. Chen, A.G. Frazier, J.P. Price, Y.L. Chen, P.S. Chu, J.K. Eischeid, and D.M. Delparte

2013 Online The Rainfall Atlas of Hawai‘i. In *Bull. Amer.Meteor. Soc.*, pp. 313-316. Vol. 94. University of Hawai‘i at Mānoa, Honolulu.

Giambelluca, Thomas W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger

2014 Evapotranspiration of Hawai‘i. Final report submitted to the U.S. Army Corps of Engineers—Honolulu District, and the Commission on Water Resource Management, State of Hawai‘i. University of Hawai‘i at Mānoa, Honolulu.

Google Earth

2015 *Google Earth Aerial Imagery*.

Green, Jonathan S.

1857 Editorial. *The Pacific Commercial Advertiser* Thursday 5 November:1. Honolulu, Hawai‘i.

Griffin, P. Bion, D.T P. Keene, and Joseph Kennedy

1987 *Kaka‘ako: Prediction of Sub-Surface Archaeological Resources, Kaka‘ako Community Development District, Archaeological Reconnaissance Survey*. University of Hawai‘i-Mānoa, Honolulu, Hawai‘i.

Hawaii TMK Service

2014 *Tax Map Key [2]*. Hawaii TMK Service. Honolulu.

Howell, H.

1901 *Map of Hana Landing and Vicinity, Maui (RM 2208)*.

Jackson, George E. Gresley

1882 *Kaunakakai Harbor -- Working Sheet*, 1:200. Hawaiian Government Survey. Honolulu, Hawai‘i.

Judd, Albert F., II, Bernice Judd, Barbara S. Wilcox, and Elizabeth G. Alexander

1969 *Missionary Album*. Sesquicentennial Edition. Hawaiian Mission Children's Society, Honolulu.

Kamakau, Samuel Mānaiakalani

1961 *Ruling Chiefs of Hawaii*. Kamehameha Schools Press, Honolulu.

1992 *Ruling Chiefs of Hawaii*. Revised ed. The Kamehameha Schools Press, Honolulu.

King, Robert D.

1931 *Map of Hana Village and Harbor, District of Hana, Island of Maui*.

Kipahulu Sugar Co.

1919 *Sugar Mill, Hana, Maui*.

Kirch, Patrick V.

2012 *A Shark Going Inland is My Chief: The Island Civilization of Ancient Hawai'i*. University of California Press, Berkeley, California.

Kuykendall, R.S.

1938 *The Hawaiian Kingdom: 1778-1854, Foundation and Transformation*. University of Hawaii Press, Honolulu.

Lucas, Paul F. Nahoa (editor)

1995 *A dictionary of Hawaiian legal land-terms*. Native Hawaiian Legal Corp. : University of Hawai°i Committee for the Preservation and Study of Hawaiian Language, Art, and Culture, Honolulu.

Macfarlane, E.C.

1892 Proclamation. *The Daily Bulletin* Tuesday, 4 October 1892:2. Honolulu, Hawai‘i

MacLennan, Carol A.

1995 Foundations of Sugar's Power: Early Maui Plantations, 1840-1860. *The Hawaiian Journal of History* 29:33-56.

McAllister, J. Gilbert

1933 *Archaeology of Oahu*. Copies available from Bernice Pauahi Bishop Museum, Honolulu.

McCurdy, Todd D., Tanya L. Lee-Greig, and Hallett H. Hammatt

2014 Literature Review and Field Inspection for the Proposed Hana Highway Improvements, Huelo to Hāna, Phase II, Project, Makaīwa Ko‘olau Ahupua‘a, Hāna District, Maui Island TMK: [2] 1-1-001:999; [2] 1-1-002:999; [2] 1-1-007:999; [2] 1-1-008:999; [2] 1-1-009:999 and [2] 1-2-001:999 (pors). Cultural Surveys Hawaii, Wailuku, HI.

McGregor, Davianna Pomaikai

2007 *Nā Kua‘āina: Living Hawaiian Culture*. University of Hawai‘i Press, Honolulu, Hawai‘i

McQuagge, Richard L.

1990 *Archaeological Report for Hana, Maui, Hawaii TMK 1-4-13:14, 15*. Copies available from Richard L. McQuagge, Haiku, Hawaii.

Meares, John

1791 *Extracts from: Voyages Made in the Years 1788 and 1789 From China to the Northwest Coast of America, with an Introductory Narrative of a Voyage Performed in 1786, from Bengal, in the Ship "Nootka"*. Translated by Bruce Cartwright. Hawaiian Historical Society Reprints. Legographic Press, London.

Mifflin, Thomas

1983 *Schooner from Windward*. University of Hawaii Press, Honolulu, Hawaii.

MKE Associates LLC, and Inc. Fung Associates

2013 Hawaii State Historic Bridge Inventory and Evaluation, Hawaii.

Nagamine Okawa Engineers Inc., and Inc. Fung Associates

2015 *Hana Highway, Route 360 Bridge Preservation Plan*, Honolulu, Hawai‘i.

NRCS

2009 *Ground-Penetrating Radar Soil Suitability Maps*. U.S. Department of Agriculture

Oceanit

2000 *Hana Highway Rockfall Mitigation Plan*. Oceanit Laboratories, Inc., Honolulu, Hawai‘i.

Orr, Maria E., Hallett H. Hammatt, and Victoria S. Creed

1997 *An Archaeological Subsurface Testing at a Parcel Adjacent to the Hana Cultural Center, Hana, Maui (TMK 1-4-13:14 & 15)*. Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Perzinski, David, and Michael Dega

2011 An Archaeological Monitoring Report for the New Lahainaluna High School Cafeteria Lahaina, Panaewa Ahupua'a, Lahaina District Maui Island, Hawai'i [TMK (2) 4-6-018: 012 por.]. Scientific Consultant Services, Inc., Honolulu.

Pukui, Mary Kawena, and Samuel H. Elbert

1986 Hawaiian Dictionary Hawaiian-English English-Hawaiian. Revised and Enlarged ed. University of Hawai‘i Press, Honolulu.

Pukui, Mary Kawena, and Laura C. Green

1995 *Folktales of Hawai‘i*. Bishop Museum Press, Honolulu, Hawai‘i.

Richards, William, and Charles Samuel Stewart

1825 *The Missionary Herald*. The Proceedings At Large of the American Board of Foreign Missions with a General View of Other Benevolent Operations. Crocker and Brewster, Boston.

Rotunno-Hazuka, Lisa, Jenny O'Claray-Nu, and Jeffrey Pantaleo

2018 *Archaeological Inventory Survey for an Agriculturally Zoned Parcel Located in Kawaipapa Ahupua‘a, Hāna District, Island of Maui TMK: (2) 1-4-006:014 pors*. Copies available from LLC. Archaeological Services Hawaii, Pu‘unēnē, Hawai‘i.

Schmitt, Robert C.

1977 *Historical Statistics of Hawaii*. University Press of Hawaii, Honolulu.

Schoofs, Robert

1978 *Pioneers of the Faith. History of the Catholic Mission in Hawaii (1827-1940)*. Sturgis Printing Co, Honolulu.

Sinoto, Aki

1985 *Archaeological Reconnaissance-- Hana Ranch, Proposed Garden Cottages, Hana, Maui, Hawaii; TMK 1-4-03:3; 1-4-04:16, 17*. Copies available from Bishop Museum, Honolulu.

Smith, V.L., and W.R. Eadington

1992 *Tourism alternative: Potentials and problems in the development of tourism*. University of Pennsylvania Press, Philadelphia.

Speakman, Cummins E.

1978 *Mowee: An Informal History of the Hawaiian Island*. Peabody Museum of Salem, Salem, Massachusetts

Sterling, Elspeth P.

1998 *Sites of Maui*. Bishop Museum Press, Honolulu.

Stokes, John F.G.

1916 Maui Heiau, Department of Anthropology, Honolulu.

1917 Report on the Heiau of Maui. In *Hawaiian Alamanac and Annual for 1913 The Reference Book of Information and Statistics Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others.*, edited by Thomas G. Thrum, pp. 125. Thos. G. Thrum, Honolulu.

The Hawaiian Star.

1897 Hana's Future. *The Hawaiian Star* February 2, 1897:5. Honolulu, Hawaii.

1898 Big Prices. *The Hawaiian Star* December 19, 1898:4. Honolulu, Hawaii.

The Honolulu Advertiser.

1910 Through the Hana District of Maui. *The Honolulu Advertiser* 4 September 1910:13. Honolulu, Hawaii.

1914 The "Ditch Country"--A Wonder Land--By Jack London. *The Honolulu Advertiser* Saturday, 28 November 1914. Honolulu, Hawaii.

The Pacific Commercial Advertiser.

1869 The Epidemic. *The Pacific Commercial Advertiser* October 2, 1869. Honolulu, Hawaii.

The Polynesian.

1853a *The Polynesian* November 19, 1853. Honolulu, Hawaii.

1853b For the Polynesian. *The Polynesian* December 24, 1853. Honolulu, Hawaii.

1854 *The Polynesian* January 21, 1854. Honolulu, Hawaii.

Thrum, Thomas G.

1909a Chapter of Firstling's. In *The Hawaiian Annual*, edited by Thomas G. Thrum, pp. 129. Thos. G. Thrum, Honolulu.

1909b Heiaus: Their Kinds, Construction, Ceremonies, Etc. In *The Hawaiian Almanac and Annual for 1910*, edited by Thomas G. Thrum, pp. 53-71. Thos. G. Thrum, Honolulu, Hawai‘i

U.S. Department of Agriculture, Natural Resources Conservation Service

2001 Soil Survey Geographic (SSURGO) database for Island of Lanai, Hawaii (hi970). U.S. Department of Agriculture, Natural Resources Conservation Service.

U.S. Geological Survey

1933 *Topographic Map, Maui Island*. United States Department of the Interior, USGS. Reston, Virginia.

1992 *Hana Topographic Quadrangle*.

Ulukau

2021 The Hawaiian Electric Library. Sponsored by the University of Hawaii and online at.

Waihona ‘Aina

2000 Mahele Database. Waihona ‘Aina Corporation.

Walker, Winslow

1931 *Archaeology of Maui*. Bernice Pauahi Bishop Museum, Honolulu.

Wilson Okamoto & Associates, Inc.

2001 Final Preservation Plan for County of Maui Bridges Within the Hana Highway Historic District, County of Maui, Department of Public Works and Waste Management.

Yucha, Trevor M., and Hallett H. Hammatt

2017 *Archaeological Inventory Survey Report for the Hana Highway Rockfall Mitigation Mile Post 12 Project, Honomanū Ahupua‘a, Hāna District, Maui Island, TMKs: [2] 1-1-001:021 por., 044 por., and [2] 1-1-001 (Hana Highway Right-of-Way)*. Cultural Surveys Hawai‘i, Inc., Wailuku, Hawai‘i.

# Appendix A SHPD Correspondence

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
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BUREAU OF CONVEYANCES
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CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

June 22, 2020

IN REPLY REFER TO:
Log No.: 2020.00706
Doc. No.: 2006LS31
Archaeology

Mr. Glen Ueno, Administrator
County of Maui
Department of Public Works
Development Services Administration Division
250 South High Street
Wailuku, Hawaii 96793

Dear Mr. Ueno:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –**
**Grading Permit Application – G T2020-0059**
**Work to Perform Application – WTP T2020-0010**
**5101 Uakea Rd., Hana – Test borings**
**Owner: Jerry and Suzanna Hupp**
**Kawaipapa Ahupuaʻa, Hāna District, Island of Maui**
**TMK: (2) 1-4-004:021 por. and 029 por.**

This letter provides the State Historic Preservation Division's (SHPD's) review of this subject permit application for the proposed drilling of two 4-inch diameter test borings to 5-10 feet deep in Uakea Road to determine soil characteristics fronting 5101 Uakea Road. Pending the results, the owners propose to design and install a new septic system for the Helene Hall building in the future. The SHPD received this permit application on March 27, 2020 which included an HRS 6E Submittal Form, a Work on County Roadway Permit Application, and a Grading Permit Application. The parcel totals 12.991 acres. The grading permit indicates proposed excavation of 0.13 cubic yards, maximum depth of excavation is 10 feet, and that a portion of the property is located within the SMA.

A search of our records indicates an archaeological survey has not been conducted on the subject parcel. The USDA (Foote et al. 1972) identifies the soils as Hana silty clay loam, moderately deep variant, 3 – 15% slopes (HKNC). The Hana Ball Park which is near the project area does contain one known historic property, an in-situ burial (Site 50-50-13-5190). Site 5190 was documented near the boundary between TMK: (2) 1-4-004:021 and the TMK: (2) 1-4-004:029. SHPD accepted the archaeological monitoring plan (AMP) prepared for the Hana Ball Park Restroom Septic System Improvements project (Fredericksen 2015) in a letter dated May 14, 2015 (Log No. 2015.01238, Doc. No. 1505MD22).

At this time, SHPD has insufficient information to determine the potential for the proposed test borings to adversely impact subsurface historic properties. Therefore, **SHPD requests archaeological monitoring** for identification purposes to adequately identify any archaeological historic properties that may be present and, if encountered, to adequately document them, determine potential impacts to them, and ensure that appropriate mitigation is implemented. See http://dlnr.hawaii.gov/shpd/about/ branches/archaeology/ for a listed of permitted archaeological firms.

**SHPD also requests** the archaeological monitoring be conducted under the guidance of the Fredericksen (2015) AMP.

Mr. Glen Ueno
June 22, 2020
Page 2

Lastly, **SHPD requests the County flag this property for SHPD review** to determine if an archaeological inventory survey (AIS) is needed, should the owners propose a future ground disturbing project, such as installation of a new septic system, due to the potential for ground disturbing projects to impact cultural deposits or burials. This letter provides a review of the proposed test borings only.

**SHPD hereby notifies the County** that the Fredericksen (2015) AMP shall be implemented during excavation of the test borings and that the permit issuance process for these borings may continue.

**SHPD requests** written notification at the start of archaeological monitoring. Within 30 days of completion of archaeological monitoring fieldwork, SHPD looks forward to receiving for review and acceptance a brief archaeological monitoring letter report of findings as specified in HAR §13-282-3(f)(1). Subsequently, SHPD looks forward to receipt of an archaeological monitoring report meeting the requirements of HAR §13-279-5 for review and acceptance.

Please contact Susan Lebo, Archaeology Branch Chief, at Susan.A.Lebo@hawaii.gov or at (808) 692-8019 for matters regarding archaeological resources or this letter.

Aloha,
Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: Building Permits, Building.Permits@co.maui.hi.us
Patricia Arabit, patricia@hirata-hawaii.com
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CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

July 12, 2021

IN REPLY REFER TO:
Project No.: 2021PR00639
Submission No.: 2021PR00639.001
Doc. No.: 2107AM07
Archaeology

Rowena Dagdag-Andaya, Director
County of Maui
Department of Public Works (DPW)
200 S. High Street
Kalana O Maui Bldg. 4th Fl
Wailuku, HI 96793
c/o juan.rivera@co.maui.hi.us

Dear Rowena Dagdag-Andaya:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –**
**County of Maui Permit Application WTP T2021/0025**
**County of Maui Environmental Management Wastewater Reclamation Division**
**Helene Hall Septic System Improvements Project (Job No. WW 19-15)**
**Kawaipapa Ahupua‘a, Hāna District, Island of Maui**
**TMK: (2) 1-4-004:029 por. and 034 por. (Keawa Place and Uakea Road ROWs)**

This letter provides the State Historic Preservation Division's (SHPD's) review of the County of Maui Environmental Management Wastewater Reclamation Division's (WWRD) Helene Hall Septic System Improvements Project (Job No. WW 19-15) and associated County of Maui Permit Application WTP T2021/0025. SHPD received the submission on June 8, 2021, which included the construction designs, a grading and grubbing permit application, a cover letter from the County of Maui requesting our review of the subject permit application, and a cover letter from Kennedy Jenks Consultants, Inc.

WWRD proposes the Helene Hall Septic System Improvements Project within a 0.39-acre area on the subject property. The project will include upgrades to the existing aerobic treatment units (ATU). One existing ATU will be rehabilitated with a new aeration blower and the other ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed, and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place and Uakea Road. The force main will be buried within the existing roadway and the existing cesspools will be abandoned and closed.

A search of our records indicates an archaeological inventory survey (AIS) has not been conducted on the property, however SIHP # 50-50-13-05190 (burial) was inadvertently discovered during unmonitored excavation work in December 2001. Subsequently, SHPD reviewed an archaeological monitoring report (AMR; Fredericksen and Fredericksen 2002) for the completion of the project in a letter dated May 15, 2002 (Log No. 29871, Doc. No. 0204MK24). The AMR indicates human remains were partially impacted during excavation for footings for a lighting project at the north end of the park and the remains have been preserved in place. The burial pit was identified in Layer IB (silty clay loam) and intrusive into Layer II (silty clay). Fredericksen and Fredericksen (2002) recovered three indigenous artifacts from Layer IA, (fill/re-deposited soil layer), consisting of a hammerstone, a hammerstone/chopper, and a pecking stone. Historic artifacts included a 1940 US penny, an Indian Head US nickel, the sherds of a small bowl, and a screw top liquor bottle. The AMR indicates no intact cultural layer was identified during archaeological monitoring and suggests that the cultural layer may have been disturbed during the initial development of the park. Subsequently, SHPD reviewed and accepted an archaeological monitoring plan (AMP;

Rowena Dagdag-Andaya
07/12/2021
Page 2

Fredericksen, March 2015) for the Hāna Ball Park Septic System Project in a letter dated May 14, 2015 (Log No. 2015, Doc. No. 1505MD22) and an AMP (Stankov and Dega, March 2021) for the Hāna Community Center Building F Parking Improvements Project (Job No. P19/025) in a letter dated May 14, 2021 (Submission No. 2020PR34284.003, Doc. No. 2105AM12). SHPD received a draft archaeological monitoring report (Log No. 2016.01844) on July 29, 2016; it has not been reviewed and accepted.

At this time, SHPD has insufficient information to make a determination regarding the potential for the subject project to impact historic properties. **SHPD requests an archaeological inventory survey (AIS)** with a subsurface testing component be conducted and that an AIS report meeting the requirements of HAR §13-276-5 be submitted to SHPD for review and acceptance prior to initiation of project related work.

The AIS shall be conducted by a qualified archaeologist in order to adequately identify and document any archaeological historic properties that may be present, to assess their significance, to determine the potential impacts of this project on any identified archaeological historic properties, and to identify and ensure appropriate mitigation is implemented, if needed.

**SHPD requests** the project proponent and archaeological firm consult with our office regarding an appropriate testing strategy prior to initiation of the AIS.

**SHPD shall notify the County** when the archaeological inventory survey report and any required mitigation plans are accepted, and the permit issuance process may proceed.

When completed, please submit the draft AIS report to our office via HICRIS to Project 2021PR00639 using the Project Supplement option.

Please contact Andrew McCallister, Maui Archaeologist IV, at andrew.mccallister@hawaii.gov for matters regarding archaeological resources in this letter.

Aloha,
*Alan Downer*

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: County of Maui, dsa.engineering@mauicounty.gov
Kari Tarnstrom, Kennedy Jenks Consultants, Inc., karitarnstrom@kennedyjenks.com
Matt Hickey, Kennedy Jenks Consultants, Inc., matthickey@kennedyjenks.com
Sean Klein, Kennedy Jenks Consultants, Inc., seanklein@kennedyjenks.com

# STATE HISTORIC PRESERVATION DIVISION REVIEW LETTER

# APPENDIX C-2

**JOSH GREEN, M.D.**
GOVERNOR | KE KIAʻĀINA

**SYLVIA LUKE**
LIEUTENANT GOVERNOR | KA HOPE KIAʻĀINA

**DAWN N. S. CHANG**
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

**FIRST DEPUTY**

**M. KALEO MANUEL**
DEPUTY DIRECTOR - WATER

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

**STATE OF HAWAII | KA MOKUʻĀINA ʻO HAWAIʻI**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

January 24, 2023

IN REPLY REFER TO:
Project No. 2021PR00639
Doc. No. 2301AM10
Archaeology

Jordan Molina, Director
County of Maui
Department of Public Works
200 S. High Street
Kalana O Maui Bldg. 4th Fl
Wailuku, HI 9679
c/o Lance Nakamura
Email: lance.nakamura@co.maui.hi.us

Dear Jordan Molina:

SUBJECT**:** **Chapter 6E-8 and 6E-42 Historic Preservation Review –**
**County of Maui Permit Application WTP T2021/0025**
**County of Maui Environmental Management Wastewater Reclamation Division**
**Helene Hall Septic System Improvements Project (Job No. WW 19-15)**
**Archaeological Literature Review and Field Inspection Report**
**Kawaipapa Ahupuaʻa, Hāna District, Island of Maui**
**TMK: (2) 1-4-004:029 por. and 034 por. (Keawa Place and Uakea Road ROWs)**

This letter provides the State Historic Preservation Division's (SHPD's) review of the County of Maui Environmental Management Wastewater Reclamation Division's (WWRD) Helene Hall Septic System Improvements Project (Job No. WW 19-15) and associated County of Maui Permit Application WTP T2021/0025. SHPD previously reviewed the project and requested an archaeological inventory survey (AIS; Project No. 2021PR00639, Doc. No. 2107AM07). Subsequently, SHPD received an archaeological literature review and field inspection (LRFI) report titled *Archaeological Literature Review and Field Inspection for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupuaʻa, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way* (Yucha et al., August 2022).

The County of Maui proposes the Helene Hall Septic System Improvements Project within a 0.39-acre area on the subject property. The project will include upgrades to the existing aerobic treatment units (ATU). One existing ATU will be rehabilitated with a new aeration blower and the other ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed, and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place and Uakea Road. The force main will be buried within the existing roadway and the existing cesspools will be abandoned and closed.

Cultural Surveys Hawaiʻi, Inc. (CSH) produced the subject LRFI report in support of the Helene Hall Septic System Improvements Project. Yucha et al. (August 2022) includes summaries of historic land use and previous archaeological investigation in the area. Additionally, CSH preformed a pedestrian survey of the project area which included the use of ground penetrating radar (GPR) within portions of the project area. Additionally, the report includes the results of the geological testing performed in the planning phase of the project. No historic properties were identified within the project area during the field inspection. However, Yucha et al. (August 2022) indicates several historic retaining walls occur along portions of Uakea Road and Keawa Place, outside of the current project area. Additionally, the GPR

survey identified one anomaly that is interpreted as a buried utility line. The geotechnical boring indicates there is variation of soils within the project area including alluvial loams, silts, and clays, basalt bedrock, and marine sand deposits.

Based on the results of the information provided in the LRFI, the County of Maui requests that the project proceed with archaeological monitoring for identification purposes.

At this time, SHPD has insufficient information to determine the potential for the project to adversely impact significant subsurface historic properties within the project area including the County of Maui ROWs. Therefore, **SHPD concurs** with County of Maui's request that the project proceed with archaeological monitoring for identification purposes in order to adequately identify if any archaeological historic properties are present and, if so, to determine potential impacts to them and, if necessary, to ensure that appropriate mitigation is implemented.

SHPD looks forward to receiving an archaeological monitoring plan (AMP) meeting the requirements of HAR §13-279-4 for SHPD's review and acceptance prior to the project initiation.

**SHPD will notify the County of Maui** when the AMP is accepted and the project permitting process may continue.

Please submit the AMP and associated submittal review fee, along with a copy of this letter, to HICRIS Project 2021PR00639 using the Project Supplement option.

Please contact Andrew McCallister, Maui Archaeologist IV, at andrew.mccallister@hawaii.gov for any matters regarding archaeological resources or this Letter.

Aloha,
Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: County of Maui, dsa.engineering@mauicounty.gov
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# ARCHAEOLOGICAL MONITORING PLAN

# APPENDIX C-3

# Draft
# Archaeological Monitoring Plan for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupuaʻa, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way

**Prepared for**
**County of Maui**
**Department of Environmental Management**
**Wastewater Reclamation Division**

**Prepared by**
**Trevor M. Yucha, B.S.**
**and**
**Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawaiʻi, Inc.**
**Wailuku, Hawaiʻi**
**(Job Code: KAWAIPAPA 5)**

**February 2023**

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# Management Summary

| | |
|---|---|
| **Reference** | Archeological Monitoring Plan for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupua‘a, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way (Yucha and Hammatt 2023) |
| **Date** | February 2023 |
| **Project Numbers** | Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: KAWAIPAPA 5<br>County Project No.: WW 19-15<br>Hawai‘i Cultural Resource Information System (HICRIS) No.: 2021PR00639 |
| **Investigation Permit Number** | CSH will likely complete the fieldwork component of this study under archaeological fieldwork permit number 23-30, issued by the Hawai‘i State Historic Preservation Division (SHPD) per Hawai‘i Administrative Rules (HAR) §13-282. |
| **Agencies** | County of Maui Department of Parks and Recreation;<br>County of Maui Department of Environmental Management Wastewater Reclamation Division (WWRD); SHPD |
| **Land Jurisdiction** | County of Maui |
| **Project Funding** | County of Maui, WWRD |
| **Project Location** | Helene Hall is a community complex located at 150 Keawa Place in Hāna in East Maui (TMK: [2] 1-4-004:034), directly across from the Hāna Bay Beach Park. The project area extends from Helene Hall along the Keawa Place and Uakea Road Rights-of-Way (ROWs) to the Hāna Ballpark parking lot (TMK: [2] 1-4-004:029) at 5091 Uakea Road. The project area is bounded by Hāna Bay to the northwest, Pu‘u Ku Islet Seabird Sanctuary and Kauiki Head to the east, and Hāna-Maui Resort to the west. Residences, churches, and various amenities are also to the north and south of the project area. The project area is depicted on a portion of the 1992 Hāna U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. |
| **Project Description** | The County of Maui Department of Parks and Recreation owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This condition causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the County |

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|---|---|
| | WWRD is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.<br><br>One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed as a wastewater pump station. The wastewater will be pumped uphill along the roadway from Helene Hall to a new treatment system and absorption field located at the Hāna Ballpark parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 ft long and aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1.5 inches in diameter and buried within the existing roadway before reaching the Hāna Ballpark parking lot and the new treatment system and absorption field. The existing cesspools will be abandoned and closed.<br><br>The improvements are anticipated to restore system operability, reliability, and treated water quality. The proposed treatment train provides aerobic pretreatment, which will provide better BOD5 removal and reduce the size of the new treatment unit at the baseball park. This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:<br><br>1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups.<br>2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs.<br>3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ballpark parking lot.<br>4. Construct an offsite traffic rated absorption field at Hāna Ballpark parking lot for effluent disposal. |
| **Project Acreage** | The project area is 0.8 acres (0.32 hectares). |
| **Historic Preservation Regulatory Context and Document Purpose** | On 22 June 2020, the SHPD provided a Chapter 6E-42 historic preservation review of Grading Permit Application G T2020-0059 and Work to Perform Application WTP T2020-0010 for geotechnical borings along Uakea Road associated with the current project (Lot No.: 2020.00706; Doc. No.: 2006LS31). The SHPD requested archaeological monitoring for identification purposes be conducted under the provisions of the Fredericksen (2015) archaeological monitoring plan (AMP), which had been prepared for previous improvements to the Hāna Ball Park Restroom Septic System Improvements Project. On 14 and 15 December 2020, CSH archaeologist, Layne Krause, M.A., conducted archaeological monitoring of the geotechnical excavations. No historic properties or cultural material were observed during this work. |

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| | On 8 June 2021, CSH assisted the County of Maui in the submission of an initial Chapter 6E-8 SHPD project review via HICRIS 2021PR00639 for County of Maui Permit WTP T2021/0025 for the Helene Hall Septic System Improvements Project.<br>On 12 July 2021, the SHPD responded to the initial Chapter 6E-8 submittal with a review letter requesting an archaeological inventory survey (AIS) with a subsurface testing component for the proposed project (HICRIS 2021PR00639; Doc. No.: 2107AM07).<br>In consultation with the SHPD, the County of Maui instead proposed the preparation of an archaeological literature review and field inspection (LRFI) report (Yucha et al. 2022) to provide additional documentation of previous land use and archaeological studies as well as the results of geotechnical testing, a pedestrian inspection of the project area, and a ground penetrating radar (GPR) survey. In consideration of the results of the LRFI, the County of Maui requested that the SHPD reconsider the requirement for an AIS for the project and instead proposed archaeological monitoring for identification purposes.<br>In their 24 January 2023 Chapter 6E-8 and 6E-42 historic preservation review letter (HICRIS 2021PR00639; Doc. No.: 2301AM10), the SHPD concurred with the County of Maui’s request that the project proceed with archaeological monitoring for identification purposes and requested an AMP be submitted for review and acceptance.<br>This AMP is intended to support the proposed project’s historic preservation review under Hawai‘i Revised Statutes (HRS) §6E-8 and 6E-42 and HAR §13-275 and 13-284. It is also intended to support any project-related historic preservation consultation with stakeholders, such as state and county agencies and interested Native Hawaiian Organizations (NHOs) and community groups. In consultation with the SHPD, this document fulfills the requirements of HAR §13-13-279-4. |
| **Historic Properties Identified** | No historic properties have been previously documented within the current project area. A field inspection of the project area (Yucha et al. 2022) observed retaining walls along portions of Uakea Road and Keawa Place that are likely more than 50 years old, however these walls were confirmed to be outside of the project area. |
| **Summary of Monitoring Recommendations** | In accordance with HAR §13-13-279-3, archaeological monitoring may be an identification, mitigation, or post-mitigation contingency measure. Monitoring shall entail the archaeological observation of, and possible intervention with, on-going activities which may adversely affect historic properties. |

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| | For the current project, on-site archaeological monitoring for identification purposes will be conducted for all project-related ground disturbance. One archaeological monitor will be assigned to each area of ground-disturbing activity throughout the project area. Any departure from this will occur only after consultation with and written concurrence from the SHPD. |

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# Section 1 Introduction

## 1.1 Project Background

At the request of the County of Maui Environmental Management Wastewater Reclamation Division (WWRD), Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this archaeological monitoring plan (AMP) for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupua‘a, Hāna District, Maui, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way (ROWs). Helene Hall is a community complex located at 150 Keawa Place in Hāna in East Maui (TMK: [2] 1-4-004:034), directly across from the Hāna Bay Beach Park. The project area extends from Helene Hall along the Keawa Place and Uakea Road Rights-of-Way (ROWs) to the Hāna Ballpark parking lot (TMK: [2] 1-4-004:029) at 5091 Uakea Road. The project area is bounded by Hāna Bay to the northwest, Pu‘u Ku Islet Seabird Sanctuary and Kauiki Head to the east, and Hāna-Maui Resort to the west. Residences, churches, and various amenities are also to the north and south of the project area. The project area is depicted on a portion of the 1992 Hāna U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), a tax map plat (Figure 2), and a 2015 aerial image (Figure 3).

The County of Maui (County) Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have the capacity to discharge the daily flows. This causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the WWRD is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.

One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed into a wastewater pump station. The wastewater will then be pumped uphill along the roadway from Helene Hall to a new treatment system and absorption field located at the Hāna Ballpark parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 ft (457.2 m) long and aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1-1/2” in diameter and buried within the existing roadway before reaching the Hāna Ballpark parking lot and the new treatment system and absorption field. The existing cesspools will be abandoned and closed.

The improvements are anticipated to restore system operability, reliability, and the quality of treated water. The proposed treatment train provides aerobic pretreatment, which will provide better BOD5 (five-day biochemical oxygen demand) removal and reduce the size of the new treatment unit at the baseball park. This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:

Figure 1. Portion of the 1992 Hāna USGS 7.5-minute topographic quadrangle showing the location of the project area (U.S. Geological Survey 1992)

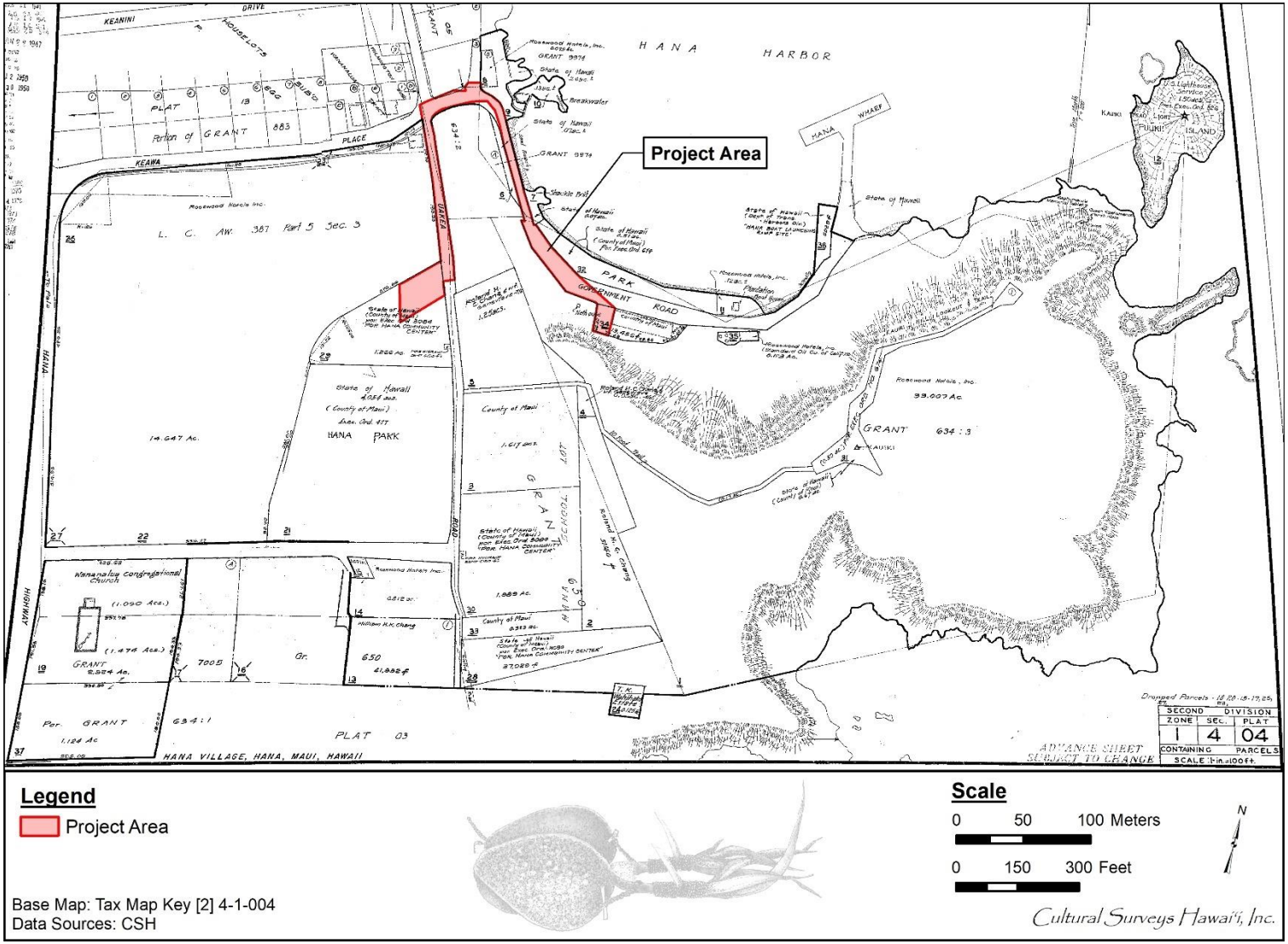


Figure 2. Tax Map Key (TMK) [2] 1-4-004 showing the project area (Hawaii TMK Service 2014)

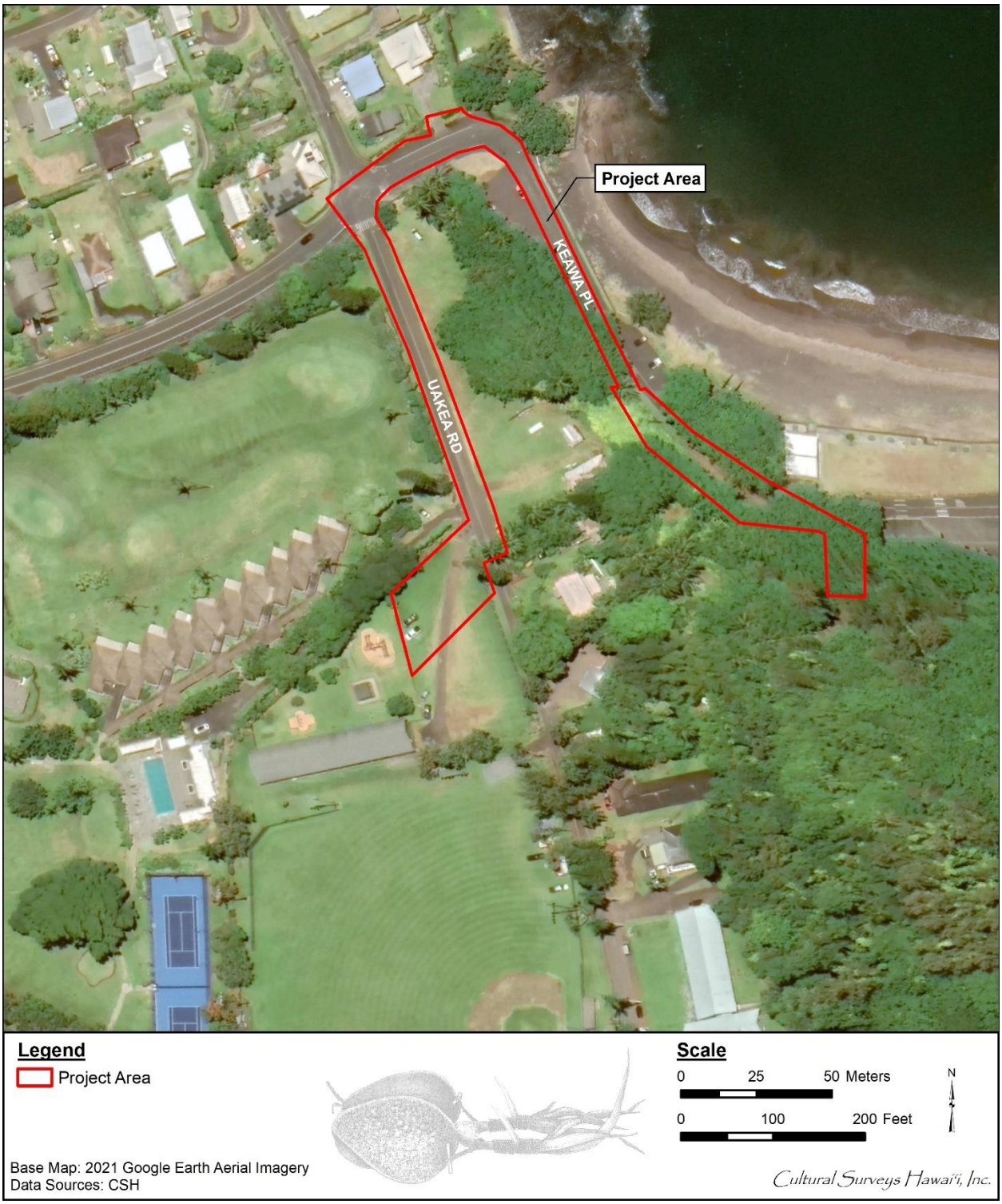


Figure 3. 2015 aerial image of the project area (Google Earth 2015)

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups,
2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs,
3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ballpark parking lot, and
4. Construct an offsite traffic rated absoprtion field at Hāna Ballpark parking lot for effluent disposal.

## 1.2 Historic Preservation Regulatory Context

On 22 June 2020, the SHPD provided a Chapter 6E-42 historic preservation review of Grading Permit Application G T2020-0059 and Work to Perform Application WTP T2020-0010 for geotechnical borings along Uakea Road associated with the current project (Lot No.: 2020.00706; Doc. No.: 2006LS31; Appendix A). The SHPD requested archaeological monitoring for identification purposes be conducted under the provisions of the Fredericksen (2015) archaeological monitoring plan (AMP), which had been prepared for previous improvements to the Hāna Ball Park Restroom Septic System Improvements Project. On 14 and 15 December 2020, CSH archaeologist, Layne Krause, M.A., conducted archaeological monitoring of the geotechnical excavations. No historic properties or cultural material were observed during this work.

On 8 June 2021, CSH assisted the County of Maui in the submission of an initial Chapter 6E-8 SHPD project review via HICRIS 2021PR00639 for County of Maui Permit WTP T2021/0025 for the Helene Hall Septic System Improvements Project.

On 12 July 2021, the SHPD responded to the initial Chapter 6E-8 submittal with a review letter requesting an archaeological inventory survey (AIS) with a subsurface testing component for the proposed project (HICRIS 2021PR00639; Doc. No.: 2107AM07; Appendix A).

In consultation with the SHPD, the County of Maui instead proposed the preparation of an archaeological literature review and field inspection (LRFI) report (Yucha et al. 2022) to provide additional documentation of previous land use and archaeological studies as well as the results of geotechnical testing, a pedestrian inspection of the project area, and a ground penetrating radar (GPR) survey. In consideration of the results of the LRFI, the County of Maui requested that the SHPD reconsider the requirement for an AIS for the project and instead proposed archaeological monitoring for identification purposes.

In their 24 January 2023 Chapter 6E-8 and 6E-42 historic preservation review letter (HICRIS 2021PR00639; Doc. No.: 2301AM10; Appendix A), the SHPD concurred with the County of Maui’s request that the project proceed with archaeological monitoring for identification purposes and requested an AMP be submitted for review and acceptance.

This AMP is intended to support the proposed project’s historic preservation review under Hawai‘i Revised Statutes (HRS) §6E-8 and 6E-42 and HAR §13-275 and 13-284. It is also intended to support any project-related historic preservation consultation with stakeholders, such as state and county agencies and interested Native Hawaiian Organizations (NHOs) and community groups. In consultation with the SHPD, this document fulfills the requirements of HAR §13-13-279-4.

## 1.3 Environmental Setting

### 1.3.1 Natural Environment

The project area is directly adjacent to Hāna Bay Beach Park, located on the northern flank of Haleakala along the eastern coast of Maui in Kawaipapa Ahupua‘a. The location is approximately 15 to 32 m (approximately 49.21 to 104.98 ft) above mean sea level (AMSL). Along Uakea Road, a variety of trees and some shrubs line the sides of most of the project area, along with manicured lawns. Natural vegetation covers the hillside behind Helene Hall and around the beach park. Plants and trees identified along the project area include ironwood (*Casuarina equisetifolia*), *hau* (*Hibiscus tiliaceus*), coconut palm (*Cocos nucifera*), false *kamani* (*Terminalia catappa*), Cook pine (*Araucaria columnaris*), *laua‘e* (*Phymatosorus grossus*), red *ti* (*Cordyline fruticosa*), and *naupaka* (*Scaevola taccada*).

In 2014, the average annual air temperature for the project area was between 21.24°C (70.23°F) in February and 24.83°C (76.69°F) in August with an average annual air temperature of 23.09°C (73.56°F) (Giambelluca et al. 2014). The vicinity of the project area received a mean annual rainfall of 1611.4 mm (63.44 inches) between 1978 and 2007, according to the University of Hawai‘i 2011 *Rainfall Atlas of Hawaii* (Giambelluca et al. 2013). The mean monthly rainfall varied between 109.8 mm (4.32 inches) in July to 187.7 mm (7.38 inches) in January.

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972) (Figure 4). The project area consists entirely of Hāna silty clay loam, moderately deep variant, 3 to 15 percent slopes (HKNC).

Hāna Series soils are described as follows:

> This series consists of well-drained soils on uplands on the island of Maui. These soils developed in volcanic ash. They are gently sloping to moderately steep. Elevations range from nearly sea level to 1,200 feet. Hāna soils are geographically associated with Honomanu and Malama soils...
>
> These soils are used for pasture and homesites. The natural vegetation consists of californiagrass, guava, kaimiclover, koa, and sodges...
>
> This soil is nonstony and moderately deep. Its surface layer is dark-brown silty clay loam that contains 10 to 15 percent gravel and cobblestones. The subsoil, 6 to 14 inches thick, is reddish-brown, very friable silty clay loam that has weak, subangular blocky structure. It contains 20 to 30 percent gravel and cobblestones. The substratum is fragmental Aa lava at the depth of 20 to 30 inches.
>
> Run off is slow to medium and the erosion hazard is slight to moderate. In places roots penetrates to a depth of 2 to 3 feet. Included in mapping were small, moderately steep and steep areas near cinder cones. Also included were a few rock outcrops.
>
> This soil is used for pasture and homesites (Capability classification IIIe, nonirrigated; pasture group 11; wood-land group 8). (Foote et al. 1972:37)

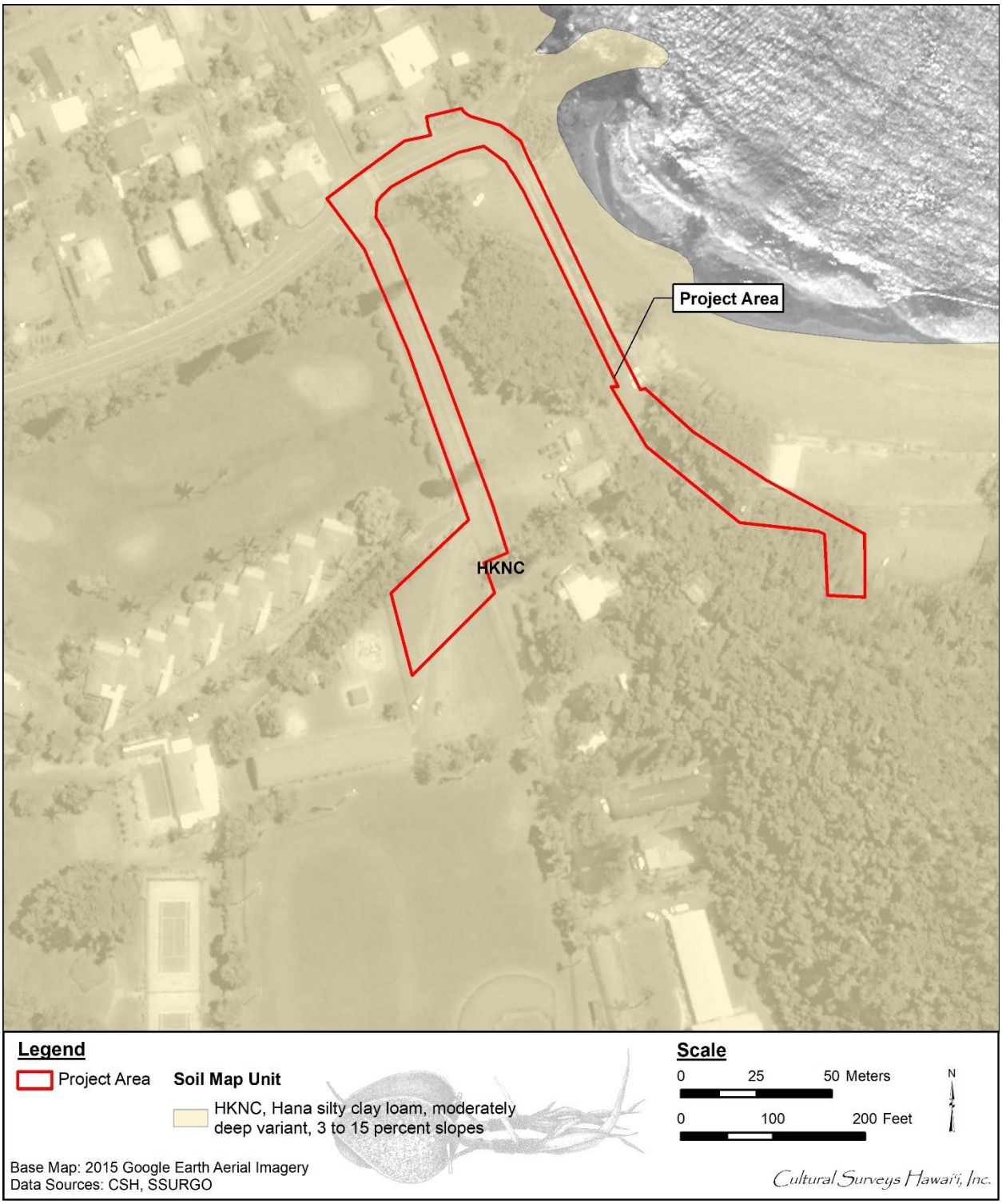


Figure 4. Overlay of *Soil Survey of the State of Hawaii* (Foote et al. 1972), indicating soil types within and surrounding the study area (U.S. Department of Agriculture 2001)

### 1.3.2 Built Environment

The project area is along portions of two rural, two-lane ROWs, Uakea Road to the west and Keawa Place along Hāna Bay Beach Park. The Kamehameha Hāna Preschool borders the northern side of the ballpark and includes an elongated single-story building and play areas. The Hāna School building is along the eastern side of Uakea Road, and it is now the Hāna Community Center and District Complex and Ballpark. The project area is east of the Hāna-Maui Resort, which features 75 rooms, suites, and family residences, which also are situated south of the project area.

# Section 2 Background Research

## 2.1 Traditional and Historical Background

### 2.1.1 Mythological and Traditional Accounts

Hawaiian storytellers of old were greatly honored; they were a major source of entertainment and their stories contained lessons while interweaving elements of Hawaiian lifestyles, genealogy, history, relationships, arts, and the natural environment (Pukui and Green 1995:IX). According to Pukui and Green (1995), storytelling is better heard than read for much becomes lost in the transfer from the spoken to the written word and *ka‘ao* are often full of *kaona* or “double meanings.”

*Ka‘ao* are defined by Pukui and Elbert (1986:108) as a “legend, tale […], romance, [and/or], fiction.” *Ka‘ao* may be thought of as oral literature or legends, often fictional or mythic in origin, and have been “consciously composed to tickle the fancy rather than to inform the mind as to supposed events” (Beckwith 1970:1). Conversely, Pukui and Elbert (1986:254) define *mo‘olelo* as a “story, tale, myth, history, [and/or] tradition.” The *mo‘olelo* are generally traditional stories about the gods, historic figures or stories which cover historic events and locate the events with known places. *Mo‘olelo* are often intimately connected to a tangible place or space (*wahi pana*).

In differentiating *ka‘ao* and *mo‘olelo* it may be useful to think of *ka‘ao* as expressly delving into the *wao akua* (realm of the gods), discussing the exploits of *akua* (gods) in a primordial time. *Mo‘olelo* on the other hand, reference a host of characters from *ali‘i* (royalty) to *akua*; *kupua* (supernatural beings) to *maka‘āinana* (commoners); and discuss their varied and complex interactions within the *wao kānaka* (realm of man). Beckwith (1970:1) elaborates, “In reality, the distinction between *ka‘ao* as fiction and *mo‘olelo* as fact cannot be pressed too closely. It is rather in the intention than in the fact.” Thus, a so-called *mo‘olelo*, which may be enlivened by fantastic adventures of *kupua*, “nevertheless corresponds with the Hawaiian view of the relation between nature and man” (Beckwith 1970:1).

Both *ka‘ao* and *mo‘olelo* provide important insight into a specific geographical area, adding to a rich fabric of traditional knowledge. The preservation and passing on of these stories through oration remains a highly valued tradition. Additionally, oral traditions associated with the study area communicate the intrinsic value and meaning of a place, specifically its meaning to both *kama‘āina* (Native-born) as well as others who also value that place.

The following section presents traditional accounts of ancient Hawaiians living in the vicinity of the project area. Many relate an age of mythical characters whose epic adventures inadvertently lead to the Hawaiian race of *ali‘i* and *maka‘āinana*. The *ka‘ao* in and around the project area shared below are some of the oldest Hawaiian stories that have survived; they still speak to the characteristics and environment of the area and its people.

#### 2.1.1.1 ‘Ai‘ai, Son of Kū‘ula the God of Fishermen

Kū‘ula (god of fishermen), his wife Hinapukui‘a, his brother Ku‘ulauka (god of cultivators), and Hina‘ulu‘ōhi‘a (goddess of forest growth, sister of Hinapukui‘a, and wife of Ku‘ulauka) lived in and around Hāna. Kū‘ula served as head fisherman under Chief Kamohoali‘i. At the time of his death, Kū‘ula prepared for the future by instructing his son, ‘Ai‘ai, on establishing fishing stations in the islands, and how to attract fish. Kū‘ula gave ‘Ai‘ai his magic objects including: “a decoy

stick called Pahiakukahuoi (-kahuai), a cowry called Leho-ula, a hook called Manai-a-ka-lani, and a stone called Kū‘ula which, if dropped into a pool, had the power to draw the fish thither" (Beckwith 1970:19). ‘Ai‘ai traveled around Maui returning fish to the *ko‘a* (fishing ground or station) of the island by erecting *kū‘ula* (stone god used to attract fish) and by teaching local people the best fishing techniques (Beckwith 1970:20).

Another type of legend concerns the many fishing-related activities, such as fishpond building and fishhook and octopus lure making, which were taught to humans by Kū‘ula and his son ‘Ai‘ai. In one account Kū‘ula, a legendary resident of Hāna, builds Hawai‘i’s first fishpond at the base of Ka Iwi o Pele. However, a chief of Hāna becomes angry with Kū‘ula who escapes, along with his wife, to the sea where they turn into fish. It is left up to his son ‘Ai‘ai to travel the islands and teach humans his father’s techniques, as well as how to worship Kū‘ula. Fishing shrines, or *ko‘a* are found on all the islands. They contain *ku‘ula* stones, which are usually oblong water-rounded boulders. The *ko‘a ku‘ula* are stone altars or houses for rites to attract and cause fish to multiply and to ensure a good catch (Kawaharada 1999:6).

2.1.1.2 Eleio and the Ghost of ‘O‘opuola

Eleio was the messenger of the king of Maui, called Kaka‘alaneo. He was known for his speed and was sent each morning to Hāna to bring *‘awa* back to the king who lived in Lāhainā. According to *mo‘olelo*, "As soon as the order was given, Eleio would run off with great speed, all the way from Lahaina to Hāna . The distance between these two places is about forty miles. It is said in the legend that Eleio could beat the wind in speed" (Fornander 1919:434).

One day during Eleio’s journey from Lāhainā to Hāna, he was stopped by the ghost Ka‘ahuali‘i, who lived in the wilderness of ‘O‘opuola in East Makaīwa Ahupua‘a.

> In one of his trips to Hāna , he met Kaahualii, a ghost, who lived in the wilderness of Oopuola. When the ghost met him, he asked that he be given some of the awa, but Eleio insulted him by telling him to take the hairs of his body and use it for his awa.
>
> When Kaahualii heard this, he gave chase, believing that he could catch Eleio; but he was unable to catch him who ran much faster.
>
> When Eleio came to Kakaalaneo, he saw that the meal, the awa for which he was sent, was being served. On his return from Hāna Eleio while running was preparing the awa at the same time, so when he entered the house, he placed the awa in the cup, strained it and placed the cup to the mouth of Kakaalaneo. Kakaalaneo was thus enabled to drink his awa before he began on his meal.
>
> Because of this Eleio was noted for his great speed and the people of the present generation think the story to be true. (Fornander 1919:434)

2.1.1.3 The Legend of the Great Eel

‘Ai‘ai followed in the footsteps of his father, using his knowledge and power and his magic objects to set up new fishing grounds around the islands. In his travels, he made a fishing ground in Hāna:

> The first fishing ground marked out by ‘Aiai is that of the Hole-of-the-Ulua where the great eel hid. A second lies between Hāmoa and Hāna o‘o in Hāna, where fish are caught by letting down baskets into the sea. A third is Koa-uli in the deep sea. A fourth is the famous akule fishing ground at Wana-ula mentioned above. At Honomaele he places three pebbles and they form a ridge where aweoweo fish gather. At Waiohue he sets up on a rocky islet the stone Paka to attract fish. From the cliff of Puhi-ai he directs the luring of the great octopus from its hole off Wailua-nui by means of the magic cowry shell and the monster is still to be seen turned to stone with one arm missing, broken off in the struggle. Leaving Hāna, he establishes fishing stations and altars along the coast all around the island as far as Kipahulu… (Beckwith 1970:21-23)

2.1.1.4 Legends of Pele in Hāna

Pu‘uhele, a sister of Pele, was said to have been brought to Hāna as a child, but was left behind because she continually bit the breast as she was being fed. The place where she stayed was Pu‘u Ka‘uiki. In another version, she is not born as human, but as a bloody fetus, which was thrown away by Pele and another of her sisters. Pu‘uhele landed at Nu‘u, and was turned into a beautiful woman who traveled to Wananalu, where she was killed for trespassing. The hill Ka‘uiki rises from the spot where she was buried (Cleghorn and Rogers 1987:6). Legendary references mostly concern geomorphologic features such as Pu‘u Ka‘uiki and the Pu‘u Ka Iwi o Pele. One legendary account concerning the creation of Pu‘u Ka‘uiki tells of a sister of the goddess Pele, Pu‘uhele (wandering hill), being left behind at Hāna, becoming Ka‘uiki Hill. In another legend, Pu‘uhele is killed and Ka‘uiki rises from the burial place (Fornander 1919:508).

Ka ‘Iwi o Pele (the bones of Pele), the hill or *pu‘u*, east of Hāna Highway also has a number of origin legends. One relates that Pele was driven from her original homeland by one of her sisters, Namakaokahai, for having a love affair with her brother-in-law. Pele is pursued by Namakaokahai and killed: her physical remains form the hill of Ka Iwi o Pele. Another legend relates that Pele, looking for a home, pauses at each of the Hawaiian Islands and, while at Haleakalā, creates various parts of Maui including Ka ‘Iwi o Pele and ‘Alau Island just off the coast (Fornander 1919:506).

2.1.1.5 Heiau

*Heiau* are traditional places of worship. Construction of some *heiau* were elaborate and large communal structures, while others were simple earth terraces or shrines (McAllister 1933:8). *Heiau* are most known to be where important ceremony took place and are large structures with platforms or altars comprised of one or more terraces (McAllister 1933:8).

Kauleiula Heiau (Walker Site 109) was located approximately 50 yards east of a “Site” on Nānu‘alele Point. It is described as follows:

> A stone platform on a rise of ground 6 to 8 feet high. It measures 60 x 95 feet and there is an additional 30 feet of level hill-top which may have been included in the heiau. On the side below the hill is a large natural pond, one of several in that vicinity. A path of stepping-stones leads across this pond and up onto the hill, crossing one corner of the heiau. The heiau is built of chunks of lava and water-worn boulders. There is a low wall on one end and several terraced platforms... Two of these at least, are graves. A house enclosure 12 x 25 feet is set an angle with the

> heiau platforms and does not seem to conform to the general plan of the heiau. The interior of the heiau is lower than the sides, but many of the terrace edges have been broken and the stones removed for other purposes. (Walker 1931:184)

Kauleilepo-Kauleiula Heiau (Walker Site 110) was located on the point of rocks just north of Hāna Bay at Kainalimu. It is described as follows:

> A twin or double heiau consisting of two elevated open platforms connected by a causeway. The larger is toward the sea and measures 42 x 54 feet The causeway is 25 feet long, 8 feet high ad [*sic*] 4 feet wide. On the other end is the smaller platform 22 x 25 feet and slightly lower than the front one. The south side of the larger has been terraced to a height of 15 feet. Construction is of water-worn boulders with pieces of Aa lava and coral sprinkled over the top. Modern houses and sheds have been built on the front of the heiau thus destroying much of the surface of the platform. Thrum gives the double name to this heiau by my informant, N. Silva, said the Kauleiula Heiau was the nearby one Site which we at first thought was only a graveyard. (Walker 1931:185)

2.1.1.6 Ke Alaloa o Maui

Kiha-a-Pi‘ilani “is credited with finishing the paved road around the island (Ke Alaloa o Maui), which his father (Pi‘ilani) had begun” (Griffin et al. 1987:9). The paved roadway was utilized in Hāmākua Loa by a group of missionaries touring Maui in 1828.

> ...having descended from the summit of Haleakala, they came down to a small village on the Halehaku seashore. On the next day, proceeding toward Hāna , they came upon ‘a pavement said to have been built by Kihapiilani, a king contemporary with Umi, an ancient king of Hawaii ... It extends more than 30 miles and is a work of considerable magnitude. This pavement afforded us no inconsiderable assistance in traveling as we ascended and descended a great number of steep and difficult paries (palis)’ ... (Kuykendall 1938:4)

In describing the building of Kiha-a-Pi‘ilani’s road Beckwith (1970:387) states, “men are said to have stood in line and passed stones from seashore to upland.” Once the road was paved however, residents of Hāmākua Loa most likely benefitted from having access to the road and to the people traveling through the district, particularly given its location between Wailuku and Hāna, two prominent political centers during the last two centuries of pre-Contact Hawaiian history.

The Alaloa also served as an instrument of transportation in wartime, which during the last half of the eighteenth century, was very frequent. During these times, the people of Hāmākua Loa and the surrounding districts (between Hāna and Wailuku) who were situated near the war path including canoe landings, the Alaloa and the cultivated and inhabited places in between were subject to plundering by warring chiefs. (Kamakau 1992:230) remarks on the impacts of war on the commoners, “wars were frequent in old days and entailed robbery and murder of the common people.” Between 1778 and 1779, Kalani‘ōpu‘u invaded Hāmākua Loa after purportedly being provoked by a resident.

> As he was sailing just off Kahakuloa, a certain man was sitting on the crest of Pu‘ukoa‘e, and as the war canoes came in sight the man made a gesture of contempt ... At Hamakualoa Ka-lani-‘opu‘u landed and engaged in battle, but Ka-hekili

> hastened to the aid of his men, and they put up such a fierce fight that Ka-Iani-‘opu‘u fled to his canoes. Landing at Ko‘olau he slew the common people and maltreated the captives by urinating into their eyes. (Kamakau 1992:91)

### 2.1.2 Early Historic Period

The division of Maui’s lands into political districts first occurred during the rule of Kaka‘alaneo under the direction of his *kahuna* named Kalaiha‘ōhi‘a (Beckwith 1970:383). The *moku o loko*, or *moku* as it is most called, literally means “to cut across, divide, separate” (Lucas 1995:77). When used as a term of traditional land tenure, a *moku* is similar to a political district that can contain smaller divisions of land such as *‘okana*, *kalana*, *ahupua‘a*, *‘ili*, and *mo‘o*.

The project site occupies a heavily storied traditional landscape *mauka* (from the mountain ridges) to *makai* (to the ocean reef) that was also rich in natural resources, masterfully engineered with agricultural/aquacultural systems and trail networks, densely populated, and favored and warred over by ruling *ali‘i* (elites) (Beckwith 1970:40; Handy and Handy 1972:206, 505).

Chief Pi‘ilani united all of Maui under his rule during the sixteenth or seventeenth century. Pi‘ilani’s sons, Lonopi‘ilani and Kiha-a-Pi‘ilani, fought for control of Maui. Kiha-a-Pi‘ilani eventually took refuge at Hāna. While in Hāna, Kiha-a-Pi‘ilani took as his wife Koleamoku, who had been betrothed to Lonopi‘ilani, which again put the two brothers to warring. Kiha-a-Pi‘ilani and his wife Koleamoku fled to Hawai‘i Island to enlist the aid of ‘Umi. ‘Umi was married to Pi‘ikea, the daughter of Pi‘ilani (sister of Lonopi‘ilani and Kiha-a-Pi‘ilani), a marriage that had formerly brought peace between the islands of Hawai‘i and Maui. However, ‘Umi sided with Kiha-a-Pi‘ilani and sent an invasion fleet to Hāna. In Hāna, at Ka‘uiki, Lonopi‘ilani’s forces, under the command of Ho‘olaemakua, withstood the Hawai‘i forces for a while until a nighttime raid overwhelmed them. With this battle, Kiha-a-Pi‘ilani gained control of Maui.

Maui chiefs ruled Hāna until its conquest in the mid-eighteenth century by Hawai‘i Island’s Chief Kalani‘ōpu‘u (Kamakau 1992:85−87). Decades of war between the island polities ensued, with Maui Chief Kahekili resuming rule of Hāna and all Maui until their conquest and incorporation into the United Kingdom of Hawai‘i by Kamehameha in 1790 (Ulukau 2021). During the last half of the 18th century the battles between Maui and Hawai‘i were carried on by the high chiefs Kahekili of Maui and Kalani‘ōpu‘u of Hawai‘i. Kalani‘ōpu‘u was in control of the Hāna and Kipahulu areas from ca. 1759 to 1765 when Kahekili won out. However, the Hawai‘i forces were able to regain control from ca. 1775 to 1783 (Kamakau 1992:83-84). In 1778, when Captain James Cook’s ships returned from their North American explorations, they stopped off Hāna but didn’t land (Beaglehole 1967:582-583). With the death of Kalani‘ōpu‘u in 1782, Kahekili regained control of Hāna, which he retained, though not without further battles with Hawai‘i Island forces (i.e., Kamehameha), until his death in 1794 (Kamakau 1992:88-91). With the death of Kahekili and the assistance of newly acquired foreign power (canons, muskets, men) Kamehameha gained control not only of Maui, but of all the Hawaiian Islands, except Kaua‘i, by 1795 (Kamaukau 1992:171). Hāna is also associated with the *ali‘i nui* (supreme elite) Ke‘eaumoku Papaiaheahe and his *‘oHāna* . His daughter, born at Pu‘u Ka‘uiki in the late eighteenth century, became Queen Ka‘ahumanu, wife of Kamehameha I (Kapiikauinamoku in *The Honolulu Advertiser*).

#### 2.1.2.1 Battle at Pu‘u Koa‘e

Around 1790, Kamehameha and his forces landed on Maui at Hāna. After having invaded Hāna, Kamehameha’s forces traveled to Hāmākua Loa. Kalanikupule, ruling chief of Maui at the time, sent his warrior Kapakahili to resist the invasion.

> When Kalanikupule heard of the landing of Kamehameha at Hāna , and that he was marching with his force through the Koolau district, he sent Kapakahili with the best troops he had through the Hamakua districts to meet and resist the progress of the invader. (Fornander 1969:236)

> The battle met at a small hill called “Bosun-bird Hill” (Pu‘ukoa‘e) situated on the makai side of Pu‘umaile at Hāna wana in Hoalua, and Kapakahili was defeated. In the evening Kamehameha beached at Halehaku, went ashore, and built temporary shelters just where he stepped foot. The feather god Kuka‘ilimoku encouraged him to fight, for its feathers bristled and stood upright in the direction of Hinawaikoli‘i; Kamehameha therefore lost his fear of a fight with slingshot. The next morning, he saw through the koa and hala trees the red gleam of feather capes. It is said that he narrowly escaped defeat by Kapakahili’s company. But reinforcements came up, Kamehameha put the enemy to flight, and pursued them along the main road or they would have rejoined their fellow warriors at Kokomo. At the ascent of ‘Opaepilau, Kapakahili was exhausted and was overtaken. “Slain by Pipili,” Kamehameha boasted over him. (Kamakau 1961:148)

> Of the campaign in Hamakualoa some momentos are still pointed out. The fortified position at Pu‘ukoa‘e on Hāna wana, which was attacked and taken by Kamehameha, who had brought his fleet round from Hāna . The hill is known as “Kapuai-o-Kamehameha,” to the west of the Halehaku stream, where he encamped for the night after taking Puukoae ... the Maui forces were routed and fled as far as Kokomo, where a final stand was made. (Fornander 1969:236)

#### 2.1.2.2 Battle of Great Canoes

In 1790, Kamehameha then began to muster his armies for a planned invasion of Maui. That summer, Kamehameha landed at Hāna. In a battle known as “Kaua o Kawa‘anui,” (Battle of Great Canoes) Kamehameha defeated the Maui advanced guard there, after which he sailed for Hāmākua Loa, sweeping the remaining Maui defenders along the coast and back into ‘Īao Valley, and annihilating them at the battle called “Kaua i Kapaniwai o ‘Īao” (Battle of the Dammed Water of ‘Īao), during which the slain warriors were said to have been so numerous, that they dammed the water of ‘Īao Stream. Kamehameha then returned to Hawai‘i to settle disputes there. In his absence, both Kahekili and the High Chief of Kaua‘i, Ka‘eokūlani formed an alliance to retake Hāna. After that success, both chiefs launched an attack on Kamehameha at Waipi‘o on Hawai‘i, where they were both defeated. After the death of Kahekili in 1793, Kamehameha assumed the rule over all of Maui, through his victory over the High Chief Kahekili’s successor, the High Chief Kalanikūpule, in the battle of Nu‘uanu on O‘ahu in 1795 (McGregor 2007:99).

2.1.2.3 Landing of the Canoes

Kamakau (1961) provides a passing reference in the context of the fleet of the Hawai‘i Island chief ‘Umi-a-Līloa coming to the aid of the Maui chief Kiha-a-Pi‘ilani in his fighting against Lono-a-Pi‘ilani and the Hāna chief Ho‘olaemakua. The Hāna chief initially repulsed the landings of the Hawai‘i Island canoes and ‘Umi-a-Līloa asks how best to get his men ashore:

> Kiha-a-Pi‘ilani answered, “There is a small harbor at Ko‘olau called Wailua-iki, and if all the canoes can not land there, there is another landing at Wailua-nui.” The blocked canoes turned about and sailed for Wailua-iki at Ko‘olau.
>
> When the canoes reached Wailua-iki, they were dismantled and set upright, and in that way the innumerable war canoes from Hawai‘i could be beached. After all the canoes were beached the men began to go overland to the site of the battle [at Ulaino well to the southeast]. (Kamakau 1961:29-30)

When ‘Umi-a-Līloa’s fleet arrived in Maui, the canoes were so numerous, the shores between the boundaries of Hāna and Ko‘olau were completely filled with canoes.

> Also at the place called the surf of Keanini as far as Pueokahi it was choked with the canoes of the Hawaii people, and so it was off Mokuhano and Naniuakane and Kaihalulu. At Aleamai, Haneoo and Hamoa, these places were completely filled with canoes. At Honokalani and at Honomaele and Ulaino, the boundaries of Hāna and Koolau, the canoes were thick. The last of the canoes landed on further at Opikoula, Nahiku, Waiohue, Wailuaiki and Wailuanui in Koolau.
>
> When Hoolaemakua saw the numbers of canoes and men, he and his men prepared to fight the men of Hawaii when the Hawaii warriors arranged themselves on the plain of Kuakaha. (Sterling 1998:122)

2.1.2.4 Battle of Kapalipilo

Kalani‘ōpu‘u and his forces invaded Maui, taking the districts of Hāna and Kipahulu and the Kau‘iki Hill. Ka‘uiki Hill is also referred to as the “fort of Kau‘iki.” Ka‘uiki Hill is a “natural fort and people on it are general safe from assault, being protected on all sides by steep and inaccessible cliffs (Sterling 1998:135).” Several battles were fought, however, Kamehamehanui and the Maui forces attempted and failed to reclaim Ka‘uiki Hill.

> Suddenly, therefore, he [Kalaniopuu] concentrated his forces and war-canoes at Kohala, and, without previous rupture of peace or declaration of war, he invaded Maui, where Kamehamehanui then ruled as Moi, and made a descent in the Hāna district. Little or no resistance was offered, and in a short time he possessed himself of the two valuable districts of Hāna and Kipahulu, as well as the celebrated fort on Kauwiki Hill overlooking the harbour of Hāna . The date of this invasion is approximately, and probably correctly, fixed at 1759.
>
> But Kamehamehanui, though taken by surprise by the invasion of East Maui by Kalaniopuu, was not a man to yield to such a usurpation and affront without an effort to recover the lost districts .... With these forces Kamehamehanui set out for Hāna and laid siege to the fort on Kauwiki. Several battles were fought with the Hawaii army under Puna, especially at Makaolehua and at Akiala, where the Maui

> forces were victorious, and in which the valour of Kaohelelani is greatly extolled. The fort of Kauwiki, however, withstood all attempts to take it, and, after a prolonged and unsucessful [sic] siege, Kamehamehanui withdrew his forces, and left Hāna in possession of Kalaniopuu, while Puna remained as its governor and chief; and it does not appear that Kamehamehanui again attempted to drive the Hawaiians out of Hāna . In the native legends this campaign is called the war of "Kapalipilo". (Fornander 1880:146-147)

This period also saw the arrival of the first European explorer, Captain James Cook, on his pan-pacific voyage. This occurrence would inevitably lead to the arrival of even more European explorers, merchant vessels, and missionary passengers across all Hawaiian Islands, including Maui. The interactions between Hawaiians and these newly arrived visitors would come to mark the reshaping of traditional land use patterns in Hawai‘i toward the islands we see today.

2.1.2.5 European Explorers

In 1778, when Captain James Cook's ships returned from their North American explorations, they stopped at Hāna and encountered Hawaiians for the first time on board the decks of their ships. This came just before the well-known incident that cost Captain James Cook his life on Hawai‘i Island when he attempted to kidnap Kalani‘ōpu‘u for use as ransom (Cordy 2000:294).

In *Exalted Sits the Chief*, Ross Cordy (2000:294) places Kalani‘ōpu‘u at this first point of contact between Hawai‘i and the West:

> Kalani‘ōpu‘u had regrouped and again invaded Maui ca. 1778-pillaging Kaupō and Kaho‘olawe…and raiding and engaging Kahekili's forces in Ko‘olau and Hāmākualoa. It was during this campaign when Captain Cook arrived off Maui's Hāmākualoa in November 1778. Kalani‘ōpu‘u went on board briefly, wearing a helmet with yellow and black feathers and a long feathered cloak. (Cordy 2000:294)

Kalani‘ōpu‘u and Kamehameha I (then, in the war company of Kalani‘ōpu‘u) both visited Cook's ships, indicating who controlled the East Maui region.

In December 1788, William Douglas, commanding the British ship, *The Iphigenia*, arrived at Hāna and continued to sail on to the island of Hawai‘i where he presented Kamehameha with a swivel cannon. This cannon was mounted on a large double canoe, together with several muskets and a quantity of ammunition. In his account of Maui from aboard *The Iphigenia*, Meares (1791:335-336) wrote the following passage:

> We had no longer appeared off Mowee than a great number of canoes came off with hogs, yams and plantains.-On this side of the island there is a large town, the residence of Titeeree, the sovereign of Mowee, who was at this time on a visit to Taheo, king of Atooi, in whose absence the government was left to the care of Harwallanee, brother-in-law to Tianna, of whose arrival he was no sooner informed, than he ordered a present of hogs to the ship; but before it arrived Tianna had observed his brother of shore, and having dressed himself in his best apparel, desired that message might be sent to invite him on board.-On his arrival they met as brothers should do after a long separation; the whole of their conduct to each other was affectionate; they melted into tears, and almost drew the same from the eyes of those who held them. After their first emotions had subsided, the chief

> requested Captain Douglas to remain with him for a few days, and engaged to supply him with any quantity of provisions that might be demanded; but as he saw no place where they could come to an anchor in safety, the surf at the same time beating with great violence, and an heavy swell with the wind blowing in shore, Captian Douglas was under the necessity of declining the invitation. (Meares 1791:335-336)

2.1.2.6 Disease in Remote Hāna

One of the earliest impacts of European contact on Native Hawaiians was the spread of Old-World diseases into island populations. With the arrival of Captain Cook in the late 1770s came the initial introduction of venereal disease and possibly respiratory ailments (Kirch 2012:158). Kirch also suggests that venereal disease is often overlooked in disease impact studies since it does not usually kill its victim “although its effects on a population with no prior exposure may have been more severe than usual” (Kirch 2012:158). Resulting from the introduction of venereal disease, the birthrate very likely plummeted because of the severe effects of disease on women’s reproductive organs who have never been exposed to them. The number of rampant diseases was to increase steadily alongside the number of traders, merchants, and visitors arriving from distant shores. To this effect Kirch (2012:158) observes:

> Later ships brought even more virulent diseases: dysentery, measles, tuberculosis, smallpox, and leprosy. Before Cook the islands were free of all these old-world scourges; consequently, Hawaiian bodies did not have antibodies or resistance against them. As we now know, such ‘virgin soil’ epidemics can have devastating effects on indigenous populations. (Kirch 2012:158)

Although there is serious debate about the actual count of the Hawaiian population at first contact with Europeans, making an exact figure for the depopulation of Hawaiians by disease difficult to grasp, the known effects of the introduction of foreign disease make a population reduction from 500,000 in 1779 to 130,000 fifty years later seem feasible (Kirch 2012:158). Given the histories of European contact in other previously unexposed locations it is likely that morbidity can account for much of the decline. Though early mortality rates are sporadic at best and often inaccurate in their measurements, there is some evidence of the impact of disease in Hawai‘i in this early period.

Lack of demographics regarding salient mortality rates is best explained by logistical issues present in the developing nation of Hawai‘i in the early to mid-1800s. In *Historical Statistics of Hawaii*, Schmitt (1977:40) explains that “statistics on deaths by cause of death are particularly lacking in long term comparability, not only because of serious under-registration in the early years but also because of major changes instituted from time to time in classification procedures.” The first statewide collection of mortality statistics associated to a cause of death did not occur until the early 1900s, and then the statistics were only in terms of individuals affected and were not tabulated according to either ethnic heritage or nationality. Regardless of this glossing of demography, the early records show tuberculosis being particularly ravaging in the beginning of the twentieth century. The first half of the 1900s regularly shows over 1,000 active cases of tuberculosis with as many as 531 deaths annually (Schmitt 1977:80). Record keeping for infectious disease (barring those transmitted by intercourse) gained more coherence by the mid-1900s, demonstrating the most commonly reported disease afflictions across the archipelago were

leprosy, tuberculosis, gonorrhea, syphilis, chicken pox, influenza, measles, mumps, pertussis, shigella, and typhoid (Schmitt 1977:80-82).

From the early census data it becomes evident that one of the most alarming among the contagions was influenza, which in some years had death tolls well above 1,000 souls, with some years having as many as 6,677 (Schmitt 1977:82). Such observations were frequently reported in the local newspapers, such as with an article by Green (1857:1) in *The Pacific Commercial Advertiser*, where the author reported that “we have all been afflicted with the influenza, natives and foreign residents. Not a few of the aged and feeble among the people have died.” Sporadic reports begin to appear with regular frequency in newspaper editorials after this, such as a 10 February article in the Daily Honolulu Press (1883:1):

> In the month of July of this year we had a visitation of Influenza. . . Very many among the foreign population were attacked, and it prevailed extensively among the natives, death not infrequently resulting with the latter, from disposing causes. Among these was John Young (Keoni Ana) the Minister of the Interior, aged only 47 (Daily Honolulu Press 1883:1)

Even with the high instance of mortality among Hawaiians, it should be noted that the person responsible for the census of the Kingdom in the mid-1800s, Richard Armstrong, thought the reported numbers were far too low. He believed that for every reported death two to three went unreported (Daws 1968:140). Flu was not the only concern in the Hawaiian Islands as made apparent by a newspaper advertisement in the 4 October 1892 *Evening Bulletin* announcing the closure of all Hawaiian Ports with the sole exception of Honolulu, due to Cholera outbreaks (Macfarlane 1892:2). Despite the remoteness and relative isolation of East Maui there was still sporadic reporting of disease afflictions affecting the population there.

Smallpox made an appearance in the early newspaper reports regarding disease among residents of East Maui. There is a November 1853 account of the first case of small pox in Hāmākua Loa from a passenger aboard the schooner *Sally* (The Polynesian 1853a:2). In a 24 December 1853 update of the account, the Commissioners of Public Health provide a description of how the disease arrived in the region as follows:

> The woman, as near as we could learn from herself and her husband, left the schooner on Friday evening, and staid over night not far from Kahului. The next day she made her way home: traveling, as we suppose through Hamakuapoko, Maliko and Kalanakahua, and reached her mother’s house, at Haiku, on Saturday night. This was one of five or six houses built as close together as they could stand; and we think from 12 to 20 persons occupied these houses. Sabbath morning some 30 individuals passed within a few rods of the house, on their way to meeting. Once of us rode to the house and saw the woman. At 2 o’clock, P.M., he returned to the house, with the magistrate of the district, and found the woman’s face covered with the small pox. She was ordered to be removed to the infected district, and the house was immediately destroyed, and the village deserted. No other case of the small pox have we had in Hamakualoa. (The Polynesian 1853b:2)

The following month, another update on smallpox in East Maui is provided in the 21 January 1854 edition of Polynesian as follows:

> A correspondent on East Maui writes,-“I am happy to report the state of things on this part of the island, as prosperous. There have been from six to ten cases of small pox in Hamakua, and three deaths. No new case during the past six weeks. We can now report freedom from the small pox, if no new case should be introduced from abroad. There has been no case in Koolau, none in Kula, none in Honuaula, and but one or two in Wailuku. We hear that there are but few cases remaining in the districts of Hāna , Kipahulu and Kaupo.” (The Polynesian 1854)

These accounts may have been related to a Honolulu epidemic of smallpox in 1853 and 1854 (Daws 1968:139) and of its impacts to the neighbor islands. It was a large pan-Hawaiian problem of which the population was wholly unprepared. Daws (1968:140) relates the scene of devastation in the more populated cities:

> The Hawaiians had never given much attention to Western ideas about medical treatment, and in this instance they paid a terrible price…Hawaiians fell sick everywhere. Some were abandoned and died alone; their bodies were left to rot. Others were buried where they lay, without coffins, in graves so shallow that wandering pigs and dogs could unearth them. Some native families nursed their sick at home, devotedly and uselessly, and carefully laid the dead under the dirt floors of their thatch huts or in their house yards, following their old burial practices and condemning themselves to follow the dead into the grave. (Daws 1968:140)

Partly because of the cultural gulf that existed between the Hawaiian and Western cultures, many people who had neither the antibodies, nor the knowledge, to combat European scourges passed away.

Although large epidemics were rare in the eastern districts of Maui, when they did arrive, they often had devastating effects. On 2 October 1869, a brief call to action was published in *The Pacific Commercial Advertiser* describing a deadly epidemic that was occurring in Honomanū and throughout the Island of Maui as follows:

> By a letter received yesterday from East Maui, we learn of the continued ravages of the epidemic fever which has prevailed for months on that Island. Rev S. Kamakahiki states, under date of the 23rd, that since the 1st of September there have been fifteen deaths at Honomanu and seven at Keanae, and that a large number of the natives were sick. From another source we learn that the once numerous population of Honomanu valley has dwindled down to two or three families. In behalf of these dying natives, we ask the Board of Health if all has been done that can be done to save them and stay the ravages of the fever? If not, is not the Board censurable? (The Pacific Commercial Advertiser 1869:3)

The ailment to blame for the 1869 outbreak was never explicitly named but given the poor state of disease reporting in general in more populous areas it is unsurprising that only small attention was paid to this affliction from Honolulu newspapers. The testament of the reporter clearly shows that even something as common as fever could have terrible repercussions on isolated and non-immune communities. The precise impact of various diseases on the populations of East Maui is wanting in terms of public recordation, but it does call to mind the many reports of early island wide archaeological studies (Stokes 1916; Thrum 1909b; Walker 1931) that report evidences of extensive habitation and agricultural features lying abandoned throughout East Maui.

### 2.1.3 Mid- to Late 1800s

2.1.3.1 Missionaries

The Hāna region of Maui was known as “one of the most isolated places in these islands, remote and difficult to access” (Bishop 1861). Because of the many treacherous ravines and unpredictable flooding, Native Hawaiians usually rode on horseback to a point before Ke‘anae, then completed the journey to Hāna by canoe. Before the establishment of the Hāna Protestant mission in 1837, missionaries reached East Maui no more than once or twice a year. From the early writings of the Protestant missionaries in the Sandwich Islands, it appears that the first excursion to Hāna by an American Protestant teacher was made in 1823. In regards to this, Richards and Stewart (1825:141) in *The Missionary Herald* write:

> …A similar adventure is related by Honorii [Native assistant to the missionaries], in a late visit to the eastern part of the island of Mowee, whither he went in the company of Keoua, wife of Governor Adams. That part of the island [Hāna] had never been visited by missionaries, and Honorii took occasion to preach to them Jesus Christ. He found them wholly uninstructed, and exceedingly attached to their idols, and disposed to resist every argument in favor of a change in their religion. Before he left the place, he ascended a neighboring hill which overhangs the sea on the top of which were several huge stones erected, covered with tapa (native cloth), and dignified with the appellation of gods. With the aid of some of his company, he succeeded in displacing them from their beds, and rolled them into the sea. (Richards and Stewart 1825:141)

The Protestant mission station of Hāna was administered in its early days by the Reverend Mark Ives and his wife, Mary Ann Brainerd Ives. The Ives were Protestant missionaries who had both arrived from New England in 1836 (Judd et al. 1969:122). The Ives were joined by the Reverend Daniel Toll Conde and his wife Mrs. Andelucia Lee Conde, who were stationed in Hāna following their arrival in 1838 (Judd et al. 1969:72). The isolated missionary station of Hāna was serviced by the 39 ton schooner *Missionary Packet* which had been built in 1825 at Salem, Massachusetts, for use between the Hawaiian Islands, as well as other schooners and steamships (Mifflin 1983:19).

Protestant missionaries, having a strong presence in Hawai‘i by the early 1800s, had almost exclusive claims to managing the salvation of its inhabitants, but the Catholic Church was soon to follow its protestant fellows to Maui’s shores. Catholic missionaries had found a favorable foothold with a few courtiers of Kamehameha III just a year after he passed the Edict of Toleration in 1839. This Edict allowed religious freedom for all inhabitants of the Kingdom of Hawai‘i. Six years later, the first Catholic missionaries arrived in the busy whaling town of Lahaina and found themselves amid a population receptive to their teachings, despite the fact that many of the *ali‘i*, the Protestant missionaries, and the Queen Regent Ka‘ahumanu were outwardly opposed to their presence on Maui (Speakman 1978:87-88). The earliest Maui converts to the recently arrived faith were two brothers, Helio and Petero Kaoeloa from Wailuku (Schoofs 1978:291). The next generation of catechist converts were soon to follow, especially Helio Kaiwiloa who passionately converted from the fold of the Protestant Church into Catholicism. Helio Kaiwiloa had left East Maui to be officially baptized, shortly before returning to Maui to travel the East Maui districts preaching the Roman Catholic faith (Speakman 1978:87-88).

Helio Kaiwiloa’s influence was significant during his lifetime spent preaching in remote East Maui. Schoofs (1978:257) in his *Pioneers of the Faith* describes Helio:

> Kaiwiloa assiduously studied his Christian doctrine and shared his knowledge with others. Going from house to house in Kahikinui he was not a little surprised to find many catechumens. He gathered them in a little chapel, where they said their prayers together and took part in the instructions. Kaiwiloa covered several adjacent villages, displaying great zeal in propagating the faith. (Schoofs 1978:257)

The increase in the number of catechumens acquired by Catholics in the Hāna district became a point of concern for Protestant missionaries, and in 1843 they prevailed upon Judge Mahune of Wailuku to send policemen to investigate the activities of Catholics and catechumen, arrest them, and transport them to Wailuku to stand trial. The charges were simple, that Kaiwiloa had gathered the catechumen once weekly in his private home for the purpose of practicing communal prayer. Perhaps perceived as a type of conspiracy, it was deemed unlawful and ordered to be stopped (Schoofs 1978:260).

Eventually, the Wailuku police made it to remote East Maui to begin the arrests. In one of the first villages they reached they arrested a half-dozen Catholics and moved onto the next village, gathering a few more of the faithful at every stop along the long road back to Wailuku (Schoofs 1978:260). All along the way additional arrests were tied together to manage the ever increasing crowd of offenders, this is why the procession was named the *pa‘akaula* (sometimes *pakaula*), or the “tying, binding with ropes” (Speakman 1978:88). Schoofs (1978:260) then relates the impressive display of solidarity that followed:

> The catechumen of Maui had agreed on the following line of conduct. If any Catholic or catechumen were arrested for any crime other than for his religion, nobody would take an interest in the case. But if, however, anyone were arrested for religion’s sake, all would declare their solidarity and voluntarily join the arrested one.
>
> This is precisely what was done. Going eastward, the ever increasing band passed through Kaupo and Kipahulu, and continued the journey along the north coast of the island until they reached Wailuku. A striking feature of this procession was that the prisoners were dressed in their Sunday best and were wearing gay floral wreathes. (Schoofs 1978:260)

This large display crossed every major *moku* on their way into Wailuku to stand trial, allowing the procession to preach as they travelled through Hāna, Nāhiku, Ke‘anae, Kailua, Ha‘ikū, and Pā‘ia (Speakman 1978:87). The entire distance travelled by the officers and their prisoners covered close to 90 miles of difficult terrain over the course of a month. There were also periodic rests along the way which afforded the persecuted Catholics time to speak with the inhabitants at their brief respites and proselytize, gathering more catechumen into their fold as they proceeded (Schoofs 1978:260).

By the time that the procession had reached Wailuku for their trial the crowd was too massive for the courts to handle. Seeing the size of the crowd containing the Catholics and their sympathizers, Judge Mahune bid all the participants to “go home” and dismissed the charges against the Catholics (Schoofs 1978:260). Helio and his catechumen had prevailed against the

persecution perpetrated by Protestant influences entrenched in Maui. An unexpected benefit of this persecution was that the number of catechumens on Maui had nearly tripled during the ordeal, bringing the count near a thousand adherents. The faithful Catholics then walked the long road back to their homes lead by Helio Kaiwiloa, spreading their faith along the way (Speakman 1978:88). Although religious ideas were developing at a rapid pace in the Hawaiian Islands after European contact, another major change was simultaneously taking place surrounding the relationship of Native Hawaiians to the land they inhabited for generations immemorial, The Māhele.

2.1.3.2 Commercial Enterprise in Hāna

A 2 February 1897 article in *The Hawaiian Star* discusses the future of the Hāna region from the perspective of the continued growth of industry and commerce in Hawai‘i at the turn of the century (The Hawaiian Star 1897). Hāna and the undeveloped slopes of East Maui are described as one of the last natural environments remaining in the State in the following excerpts:

> The district of Hāna is one of the least known to the general public of any districts on the Islands. Beyond the fact that there are three sugar plantations, viz: Hāna , Reciprocity and Kipahulu, the average citizen of Honolulu knows very little about it. It is one of the districts that, like Kona and Puna, will one of these days awake out of sleep.
>
> The prospects of the Hāna district are good. The sugar plantations lie on the belt of the undulating land at the extreme east of the Island. To the northwest of Hāna Plantation there is an extent of country stretching for twelve or fourteen miles, which, at one time, supported a large population, but which at present time has only a scattered villages here and there.
>
> The energy to develop these lands must come from without, it can never come from within. Again, it is not only energy and capital that are required, but roads. The roads of the portion of the Hāna district have hardly been touched since the days of Dr. Judd, who, so far as memory serves, had the present so-called road constructed. (The Hawaiian Star 1897:4)

The ambition for successful commercial cultivation in East Maui continued to be the focus of all endeavors throughout the mid- and late-1800s. Sugar, coffee, and rubber plantations were started throughout the region with high hopes of success (Figure 5). A 19 December 1898 article in *The Hawaiian Star* documents a large land sale in Nāhiku and describes the beginning of “the awakening” of the region to foreign industry in the following excerpts:

> The land sale which took place at Paia on Saturday afternoon, December 17th, was indeed a phenomenal one. There were three lots for sale, and each of them sold for a little over five times the appraised price.
>
> The lands in question are situated in Nahiku among the Palis of East Maui. A couple years ago it would have been hard to give the land away and no one wanted it, unless the chances of permanent government and therefore capital were assured. So the land lay a waste of guava scrub, ferns, ohia, kukui, lauhala and so forth. The thundering waterfalls crashed over the cliffs and the streams roared over their rocky

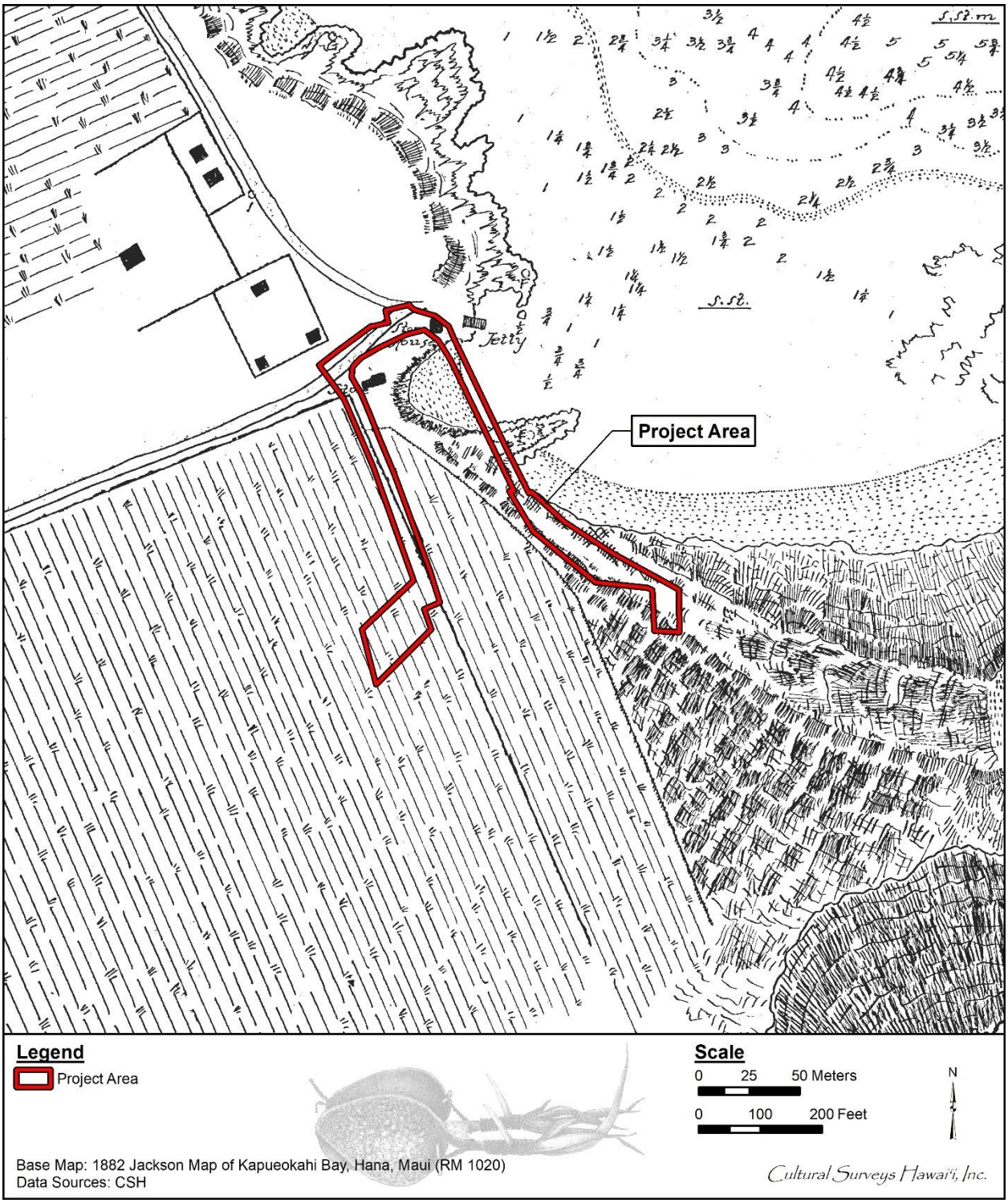


Figure 5. Jackson (1882) map of Kapueokahi Bay showing agricultural fields within and surrounding the project area along with several structures

> beds to the ocean, with no tribute to the soil in the shape of irrigation. For miles there would be no habitation.
>
> Now all this is being changed. The district, one of the most fertile on the Islands, awakes out of its lethargy. The valleys which have only heard the roar of the cataract and the rush of the stream will wake to the sound of the steam whistle and the ax, and man will enter upon his kingdom. Cultivation and civilization with reign, but the wild beauty of the Koolau district with be gone. Again this is progress under annexation. (The Hawaiian Star 1898)

### 2.1.4 The Māhele and the Kuleana Act

Initiated by the Organic Acts of 1845 and 1846, the most significant change in land-use patterns and allocation came with the Māhele of 1848, and the subsequent privatization of land throughout Hawai‘i. This action hastened the shift of the Hawaiian economy from subsistence-based to market-based, which has drastically altered the cultural and environmental landscape of Hawai‘i. During the Māhele, all lands in the Kingdom of Hawai‘i were divided between *mō‘ī* (king), *ali‘i*, *konohiki* (resident overseers of an *ahupua‘a*), and *maka‘āinana* (tenants of the land), which allowed the land to pass into the Western land tenure model of private ownership. On 8 March 1848, Kauikeaouli (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners (Chinen 1958).

Native Hawaiians who desired to claim the lands on which they resided were required to present testimony before the Board of Commissioners to Quiet Land Titles. Upon acceptance of a claim the Board granted a Land Commission Award (LCA) to the individual. The awardee was then required to pay in cash an amount equal to one-third of the total land value or to pay in unused land. Following this payment, a Royal Patent was issued that gave full title of ownership to the tenant (Chinen 1958:8-14). In this way, the government of Hawai‘i offered land for sale to both Native Hawaiians and foreigners. Such lands were referred to as Royal Patent Grants or as Grants.

On 19 October 1849, the Hawaiian Privy Council adopted resolutions to protect the rights of Native tenants, the *maka‘āinana* (common people/tenants of the land). The Kuleana Act of 1850 confirmed these rights. Under this act, the claimant was required to produce two witnesses who knew the claimant and boundaries of the land, knew that the claimant had lived on the land for a minimum of two years, and knew that no one had challenged the claim. The land also had to be surveyed. Native tenants or naturalized foreigners who could prove occupancy on the parcels before 1845 could be awarded lands they occupied or that they cultivated as *kuleana* (land holding of a tenant or *hoa‘āina* residing in the *ahupua‘a*) awards. No commutation fee was necessary to apply for a Royal Patent for a *kuleana* award, as the commutation fee had presumably already been paid by *ali‘i*/*konohiki* who had been awarded the entire *ahupua‘a*, or an *‘ili* (a land division within an *ahupua‘a*) in which the native tenant claimed his own small parcels (Chinen 1958:29-30).

Land sales to foreigners became allowed through the passing of the Alien Land Ownership Act in 1850. Despite the effort to allocate lands to the *maka‘āinana*, the *ali‘i* control of the majority of lands persevered and much of these lands were ultimately obtained by foreigners for commercial agriculture and ranching enterprises. In many cases, land sales to foreigners were vast and often encompassed large portions of the *ahupua‘a* in which they were located. Additionally, while *kuleana* awards were granted to native tenants in fee simple and free of commutation at Honua‘ula,

payment to the government surveyors and Land Commission to cover costs to survey the lots also became a factor in decisions to keep or abandon claims. According to Alexander (1890:119), between 1850 and 1860, nearly all desirable government lands were sold.

There are four LCAs in the vicinity of the project area with one, LCA 387:5, that the project area overlaps. Four Land Grants, Grants 634:2, 634:3, 650, and 883, are also in the vicinity of the project area and the project area overlaps Grants 634:2 and 634:3 (Table 1 and Figure 6 through Figure 8).

The foundation for private land ownership set by the Māhele of 1848 began a very marked pace of development across the entire archipelago, and Maui was no exception to the age of Western development that was about to dawn across the island. The Māhele enabled many foreigners and foreign nationals to acquire land for the establishment of ranching and plantation operations, including the infrastructure projects that were aimed at supporting these land-intensive industries (aqueducts, roads, etc.). All of this was happening alongside civic development in the more populated areas as the Hawaiian economy grew, a growth funded in part by the government land sales to foreigners. Additionally, many foreign nationals who relocated to Maui to work were enabled to acquire their own homestead lands, and thus establish themselves and future generations on the island, increasing the ethnic and cultural diversity of Maui. Though these changes would signify a new period of economic growth for the Kingdom of Hawai‘i as a whole, the pace of development would continue to impact the social and environmental landscape of East Maui.

Table 1. LCAs and Grants within the vicinity of the project area

| **Award #** | **Type** | **Claimant** |
|---|---|---|
| 387:5 | LCA | ABCFM |
| 419:1 | LCA | Kawainui |
| 419:2 | LCA | Kawainui |
| 615 | LCA | Mose Ulunahele |
| 634:2 | Grant | Gerrit P. Judd |
| 634:3 | Grant | Gerrit P. Judd |
| 650 | Grant | Maui |
| 883 | Grant | Gerrit P. Judd |

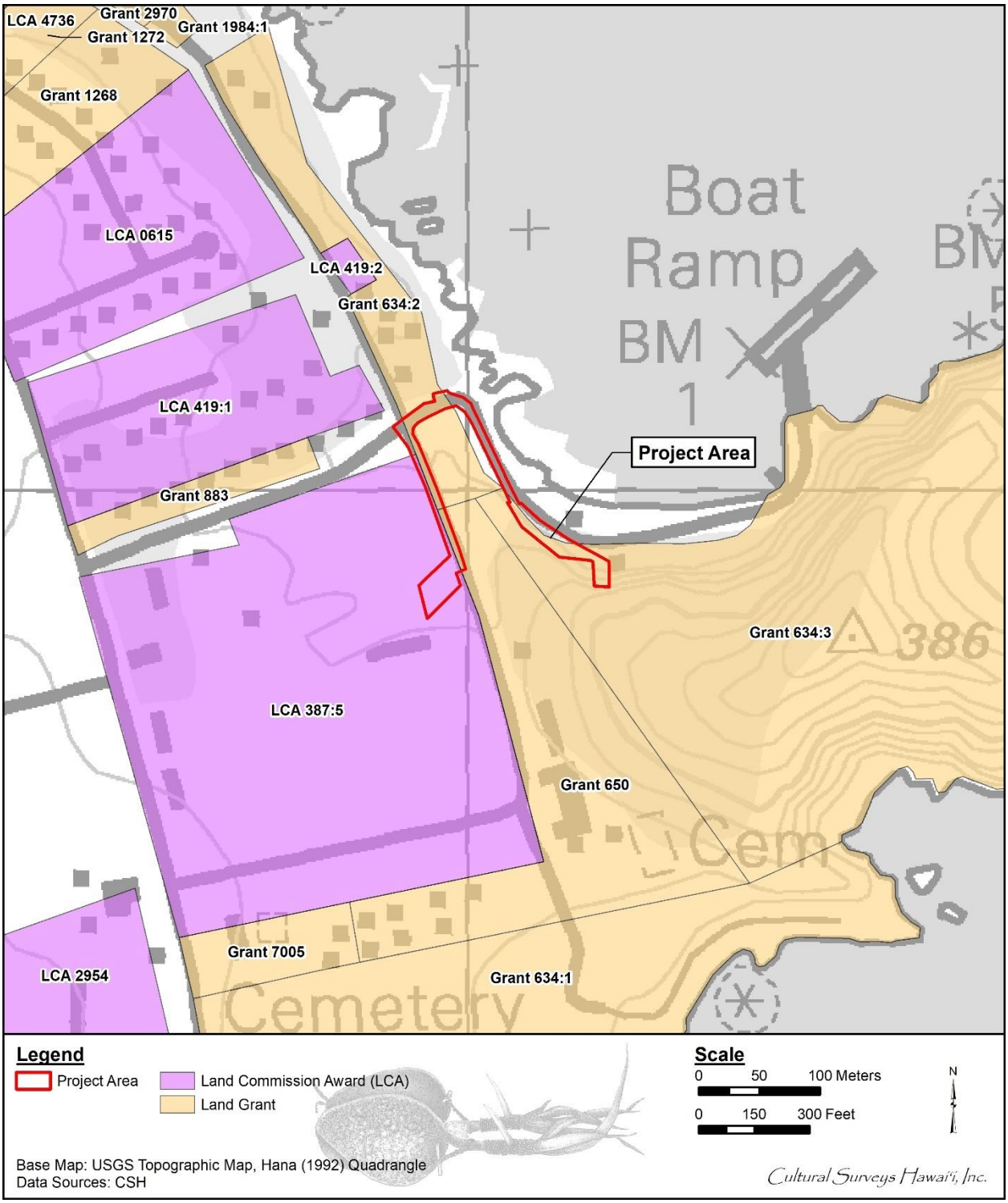


Figure 6. Portion of the 1992 Hāna USGS 7.5-minute topographic quadrangle showing Land Commission Awards and Land Grants in the vicinity of the project area (U.S. Geological Survey 1992)

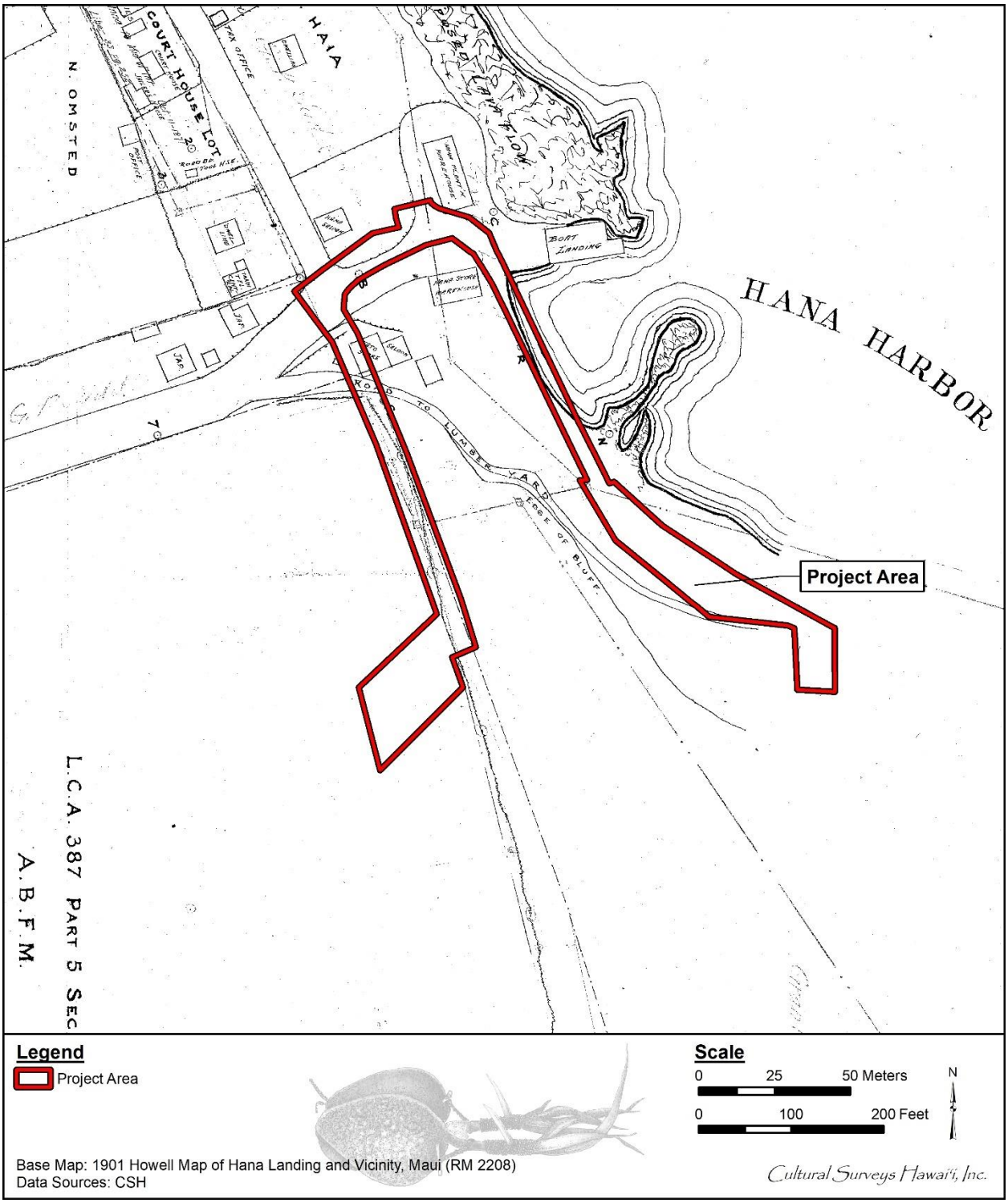


Figure 7. Portion of a Howell (1901) map of Hāna Landing showing LCA 387 and surrounding development

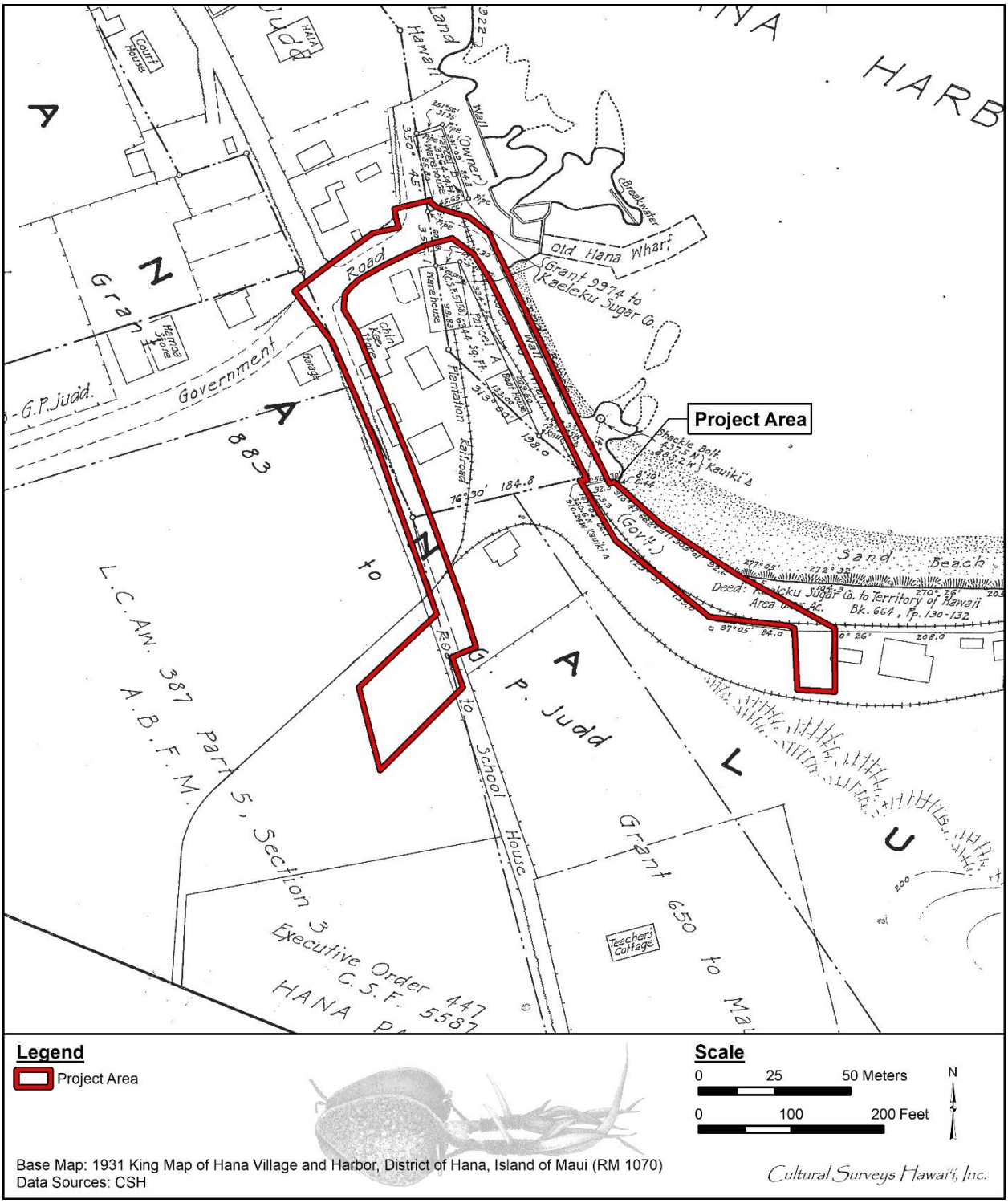


Figure 8. King (1931) map of Hāna Village and Harbor showing the project area surrounded by Land Grants and the presence of a plantation railroad corridor

### 2.1.5 1900s

According to the Census Bulletin of 1900, the population of Hāna District was reported to be 5,276 and the population of Makawao District was reported as 7,236 (Thrum 1909a:18). The Board of Health reported 755 births and 422 deaths in Maui County in the year 1900 (Schmitt 1977:13). An interesting population dynamic of this period is that while the populations of the Wailuku and Makawao districts continued to grow by at least a thousand inhabitants every ten years, there is a corresponding negative effect on the population of Hāna. Official census figures have the Hāna population shifting from 5,276 persons in 1900 to only 969 persons in 1970 (Schmitt 1977:13-14). While disease and urban drift may play a role in these figures, there is also the added regional strain of the establishment, and subsequent collapse, of agricultural industries throughout the East Maui region. While East Maui was originally slotted for agrarian development by early developers, this industry would, during the twentieth century, gradually give way to tourism as its primary draw to visitors and businessmen.

A feature section in the 4 September 1910 edition of the *Honolulu Advertiser* documents an August 1910 tour through the Hāna District of Maui by H.M. Ayres, a reporter for the paper (The Honolulu Advertiser 1910:13). The tour, which began on the government road and then continued along the Koolau Ditch trail, provides a first-hand account of the region, albeit from an outsider's perspective, along with photographs of homesteads, homesteaders, landscapes, and prominent structures. While passing through Honomanū Gulch, Ayers relates "…there is none more impressive in the islands. Its beauty baffles description and were its attractions name widely known, tourists in plenty would assuredly visit…" (The Honolulu Advertiser 1910:13). Continuing along the ditch trail to Ke‘anae, Ayers stopped at the house of Halemano and recounts the following observations of life in Ke‘anae:

> At the house of Halemano we were made very welcome, supper being ordered by our host at a Chinese restaurant nearby. He naively remarked that poi and fish were no good for haoles. Halemano, who is postmaster and political boss of the precinct, is a dignified old native. His house is on the campaign circuit and when election time rolls round there are stirring times at his residence. His daughter, Aunie, is easily the belle of the district.
>
> Many of the Keanae girls have Chinese husbands and appear to be quite happy with them. They are better providers than the Hawaiians and this probably accounts for the phenomena.
>
> Before leaving Keanae we offered to buy a squid stone from Halemano but the old man refused to part with the relic, declaring that it was his wife's and that he didn't need the money-a rare thing with the average Hawaiian today.
>
> While we were in Keanae the natives were conspicuous by their absence. Returning for some article that I had forgotten, after my departure, I found quite a gathering discussing the business of the malihini haoles while across the rice fields men, women, and children were hastening toward the house of Halemano. (The Honolulu Advertiser 1910:13)

#### 2.1.5.1 Jack London

In the summer months of 1907, renowned travel writer Jack London and his second wife Charmian, stopped at Maui on the South Pacific portion of their sailing trip around the world to travel the ditch trail across the Hāna District. His horseback travels around Haleakalā and overland to Hāna appeared in his book “The Cruise of the Snark,” a non-fiction account of London’s travels and experiences during their world tour that was published in 1911. In select excerpts from London’s book reprinted in *The Honolulu Advertiser* (1914:10) the beautifully rugged East Maui coast is described as follows:

> The windward side of Haleakala is serried by a thousand precipitous gorges, down which rush many torrents, each torrent of which achieves a score of cascades and waterfalls before it reaches the sea. More rain comes down here than in any other region in the world… Hundreds of inches of rain annually, on fertile soil, under a tropic sun, means a steaming jungle of vegetation. A man, on foot, cutting his way through, might advance a mile a day, but at the end of a week he would be a wreck, and he would have to crawl hastily back if he wanted to get out before the vegetation overran the passage way he had cut. (Jack London in The Honolulu Advertiser 1914:10)

London also observed the lay of the land near the Ko‘olau Gap in Haleakalā Crater, travelling into Hāna, Ke‘anae, and eventually Nāhiku. As a keen observer and seasoned writer, London took notice of the abundance of water flowing from the local watersheds. London also inspected the rubber plantation at Nāhiku and traveled by way of the Nāhiku Ditch Trail, of which he commented:

> Water means sugar, and sugar is the backbone of the Territory of Hawaii, wherefore the Nahiku Ditch, which is not a ditch, but a chain of tunnels. The water travels underground appearing only at intervals to leap a gorge, travelling high into the air on a giddy flume and plunging into and through the opposing mountain. This magnificent waterway is called a “ditch,” and with equal appropriateness can Cleopatra’s Barge be called a box-car… There are no carriage roads through the ditch country, and before the ditch was built, or bored, rather, there was no horse-trail…O’Shaughnessy was the daring engineer who conquered the jungle and the gorges, ran the ditch and made the horse-trail. He built enduringly, in concrete and masonry, and made one of the most remarkable water-farms in the world. Every little runlet and dribble is harvested and conveyed by subterranean channels to the main ditch. But so heavily does it rain at times that countless spillways let the surplus escape to the sea. (Jack London in The Honolulu Advertiser 1914:10)

London’s visit to East Maui could not have been better timed and his observations more appropriate considering the ongoing development of agricultural endeavors in the Hāna District. Surely his descriptions of the local watersheds, his experiences in plantation communities, and the feats of engineering that connected them would reach many readers abroad by way of his penmanship. Even the impressive engineering feats London witnessed in this environment could not detract from the wildness of the surrounding countryside he observed:

> The vegetation ran riot over that wild land. There were forests of koa and kolea trees, and candlenut trees… Wild bananas grew everywhere, clinging to the sides

> of the gorges, and, overborne by their great bunches of ripe fruit, falling across the trail and blocking the way. And over the forest surged a sea of green life, the climbers of a thousand varieties, some that floated airily, in lacelike filaments, from the tallest branches; others that coiled and wound about the tree like huge serpents; and the one, the ie-ie, that was for all the world like a climbing palm, swinging on a thick stem from branch to branch and tree to tree and throttling the supports whereby it climbed… In fact, the ditch country is nothing more nor less than a huge conservatory. Every familiar variety of fern flourishes, and more varieties that are unfamiliar, from the tiniest maidenhair to the gross and voracious staghorn, the latter the terror of the woodsmen, interlacing with itself in tangled masses five or six feet deep and covering acres. (Jack London in The Honolulu Advertiser 1914:10)

#### 2.1.5.2 Sugar Industry in Hāna

Sugar was an indigenous crop, but small-scale commercial harvesting of the crop began in the mid-1800s (MacLennan 1995:97). Hāna was one of the earliest locales to become involved in commercial cane operations in “1849 or 1850, when a Mr. Lindgren cultivated 60 acres of cane and ground it with a mill erected in a grass shack” (Condé and Best 1973:247). This grass shack mill was reported to be in the Haneo‘o Hāmoa flats *makai* of the Hāna Highway. In 1861, Mr. August Unna gained control of these and other sugar plantation lands and began two decades of land consolidation and improvements including construction of the plantation railroad (Condé and Best 1973:248). During this early period of commercialization, small farmers apparently raised cane crops within LCAs and grants, and then sold the cane to the mills. By the end of the century, Hāna Plantation had taken over large tracts of land and smaller farmers disappeared, as did most of the remains associated with this era (Condé and Best 1973:247–250).

The Hāna Plantation continued to mechanize throughout the early 1900s when Theo H. Davies and Company assumed ownership from Grinbaum. The plantation name changed to Ka‘eleki‘i Sugar Co. with the Theo H. Davies acquisition, and it was at this time that the virtual disappearance of former features took place (Condé and Best 1973:247–250). The use of natural bedrock outcrops, ledges, gulch edges and lava flow edges to pile excess rocks is an observable pattern of past land utilization, especially of the commercial sugar cane era. Some of these rock piles or “waste areas” were designated as archaeological sites (Borthwick et al. 1992:16). Maps from 1919 and 1931 depict two large warehouses for the Kaeleku Sugar Company near the entrance to Hāna Landing (see Figure 8 and Figure 9).

In 1933, the ownership of the plantation changed to C. Brewer & Company. By 1945, the plantation closed and was liquidated (Condé and Best 1973:250). In 1946, Paul Fagan, previous owner of Pu‘u o Hoku Ranch on Moloka‘i as well as Maunawili Ranch on O‘ahu, purchased 14,000 acres of Hāna Plantation. Mr. Fagan converted the plantation to a cattle ranch and began Hotel Hāna Maui the same year. The conversion from sugar to pasture lands was done for the most part by the cattle themselves, who were put in the abandoned cane fields to graze, thus destroying the cane (Hāna Ranch, n.d.).

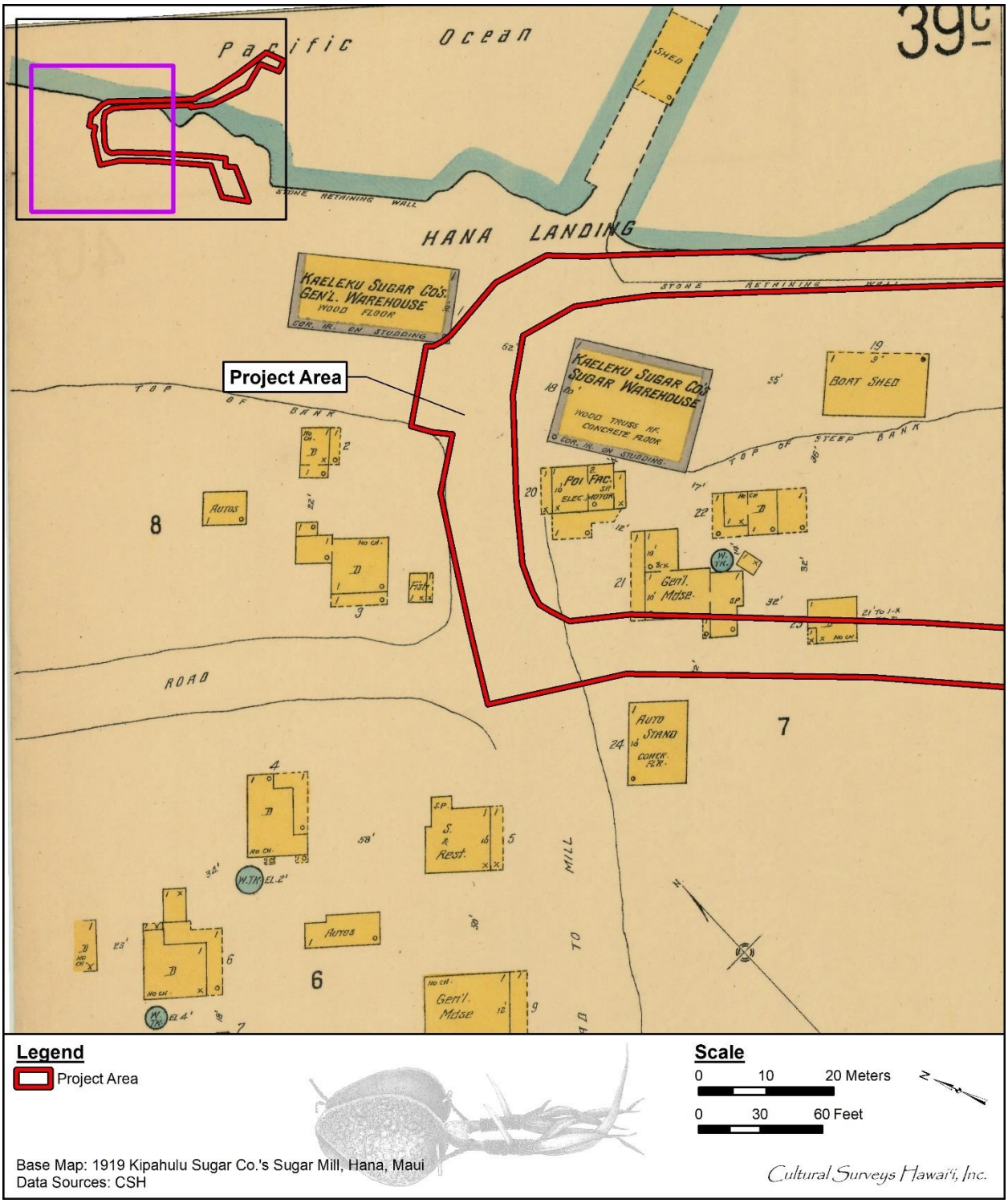


Figure 9. Portion of the (Kipahulu Sugar Co. 1919)

2.1.5.3 Hāna Highway Historic District

The paving of the Hāna Highway in 1962 increased tourist visitation in the project area vicinity. Afterwards, infrastructure and development projects in the 1970s through the present shaped the current landscape (Smith and Eadington 1992:128) (Figure 10 through Figure 12).

The catalyst for development in Hāna is described in *Tourism Alternatives: Potentials and Problems in the Development of Tourism* by Smith and Eadington (1992:12):

> In the early 1980s, after battles with the community over its plans to expand and upgrade its facilities, the Hāna Ranch Company sold its holdings to the Rosewood Corporation, which was owned by the Caroline Hunt Trust Estate. The corporation is active in oil, gas, venture capital, real estate, and tourism. With the initial $20 million purchase price, the corporation bought the 4,500-acre Hāna Ranch, Hāna Water Resources, Hāna Water Company, Hāna Maui Transport Company, Hāna Land Company, Hāna Pacific, Inc., Zen at Hāna Ranch (horticulture), Hāna Ranch Ltd., and Hāna Stockers Company. The present operation employs close to 400 people out of a total estimated population of 2,000. (Smith and Eadington 1992:128)

The Hāna Highway Historic District, which extends from Hoalua Bridge near Huelo in the Makawao District to Koukouai Bridge in the Kīpahulu District, includes 78 contributing feature components dating to over 50 years old. The Hāna Highway was also recognized as a Millennium Legacy Trail in 2000, and in 2001 was nominated to the National Register of Historic Places (NRHP). A total of 73 contributing resources of the Hāna Highway Historic District were documented within the district’s NRHP registration form (Duensing 2001). A Historic American Engineering Record (HAER) No. HI-75 for the Hāna Belt Road was published by the National Park Service in 2005 to provide descriptions of the historic architectural and engineering features of the Hāna Historic District (Duensing 2005). Of the 78 component features of the Historic District approximately 56 of the bridges/culverts exist between Hāna and the central isthmus of Maui along the north shore of the island.

The general path of the road is much older than the existing historic highway. It has predecessors as early as the time of the Maui King Pi‘ilani’s Alaloa (“long road”) and Kihapi‘ilani’s addition to the Alaloa known as “The Kings Trail” in the 1600s, to the time of the “Ditch Trail” that ran alongside the early water catchment and diversion ditches for agriculture in the early 1900s. The Hāna Highway was first built with the intent to circumscribe East Maui with a levelled road surface in 1900, complete with gulch spanning bridges. The initial roadwork of the early 20$^{th}$ century was piecemeal and incremental at best, sometimes making use of horse and foot trails connecting otherwise isolated sections of road (Duensing 2005).

Dawn E. Duensing in Hāna Belt Road HAER HI-75 (2005:29) describes the difficulty of working on the early road as follows:

> The work required in the Hāna District was quite extensive due to the heavy rainstorms and freshets. At times flooding during the winter rainy season made it impossible to travel on the Hāna Road…mail carriers were unable to complete their rounds, so the SPW [Superintendent of Public Works] ordered foot bridges

built over deep gulches. Travelers were stuck with difficult overland travel on horseback

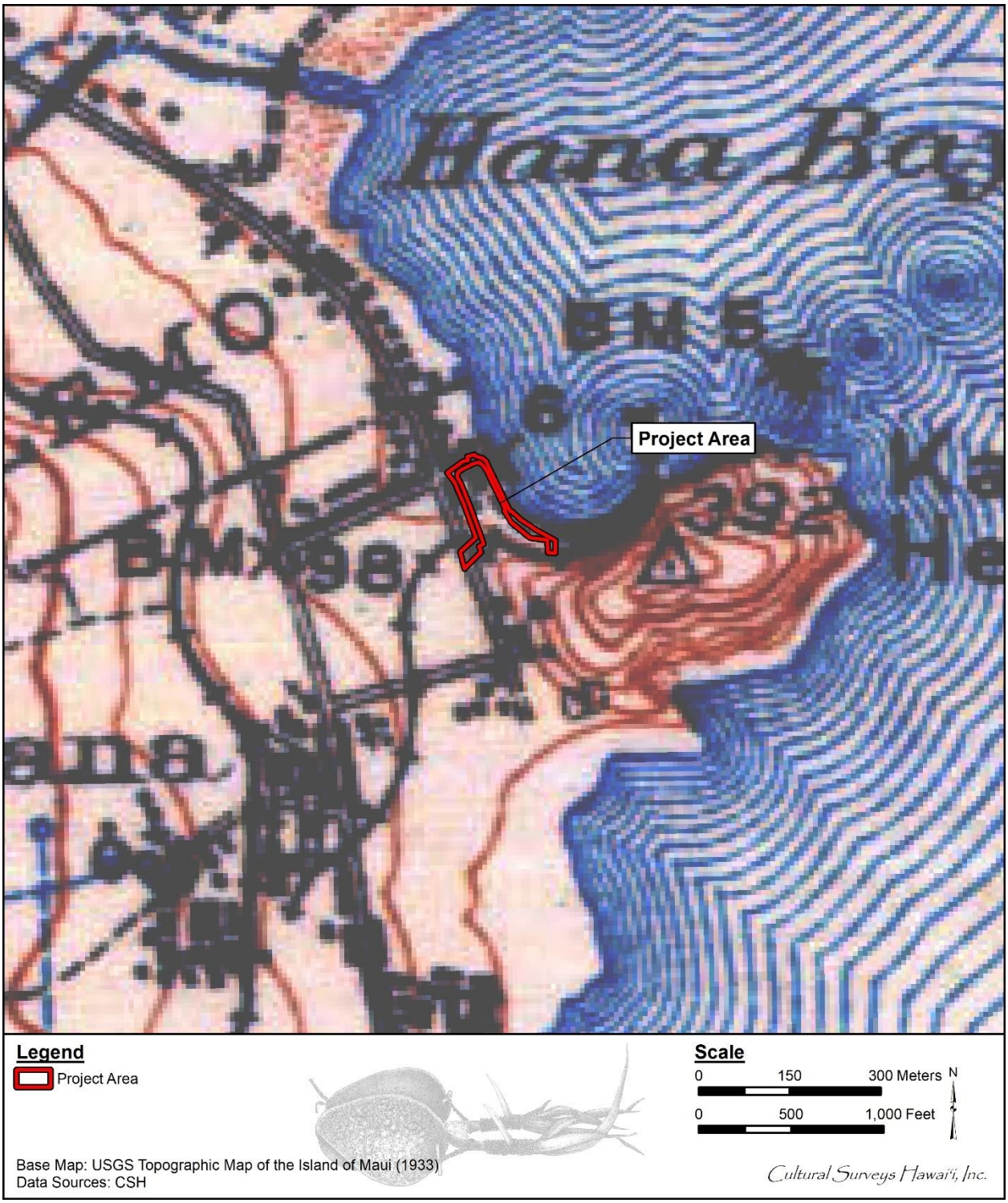


Figure 10. Portion of the 1933 Maui Island USGS 7.5-minute topographic quadrangle showing the location of the project area (U.S. Geological Survey 1933)

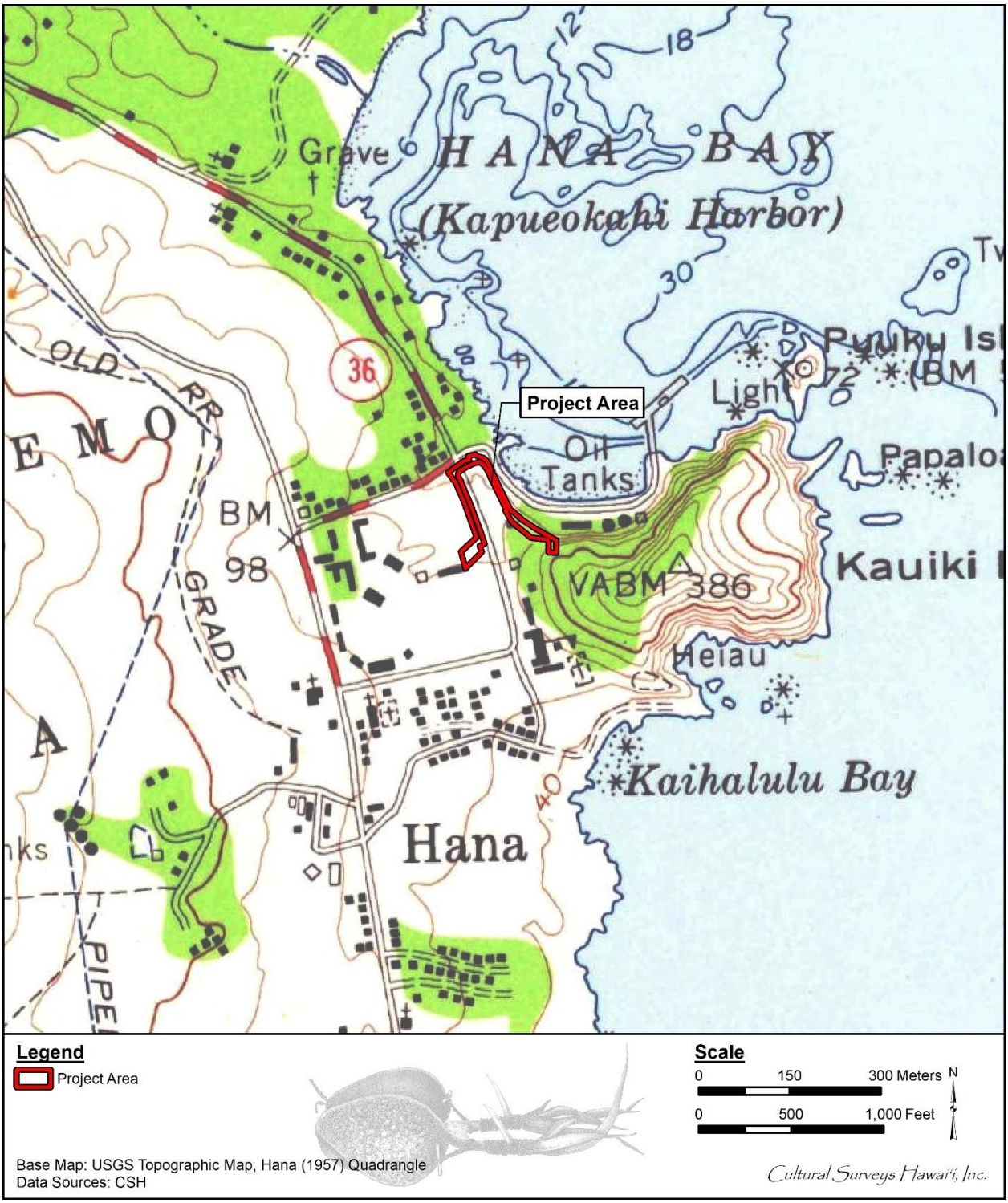


Figure 11. Portion of the 1957 Hāna USGS topographic quadrangle showing the project area

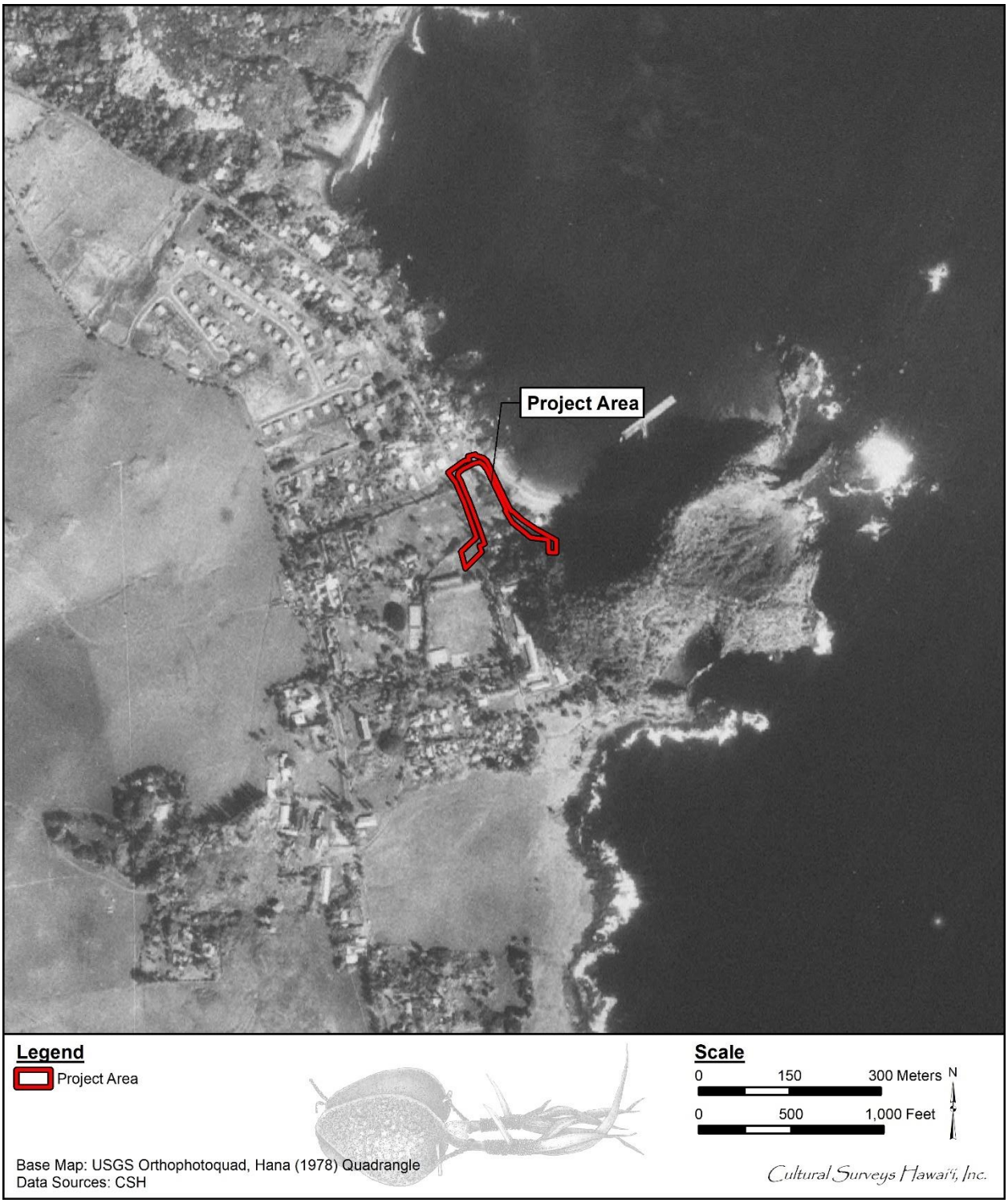


Figure 12. Portion of the 1978 Hāna USGS orthophotoquad showing the project area

> or by steamers, which used what one resident called the "most impractical landings." (Duensing 2005:29)

Many of these problems were alleviated with the passing of the County Act of 1905 that established county government throughout the State of Hawai‘i, an important function of which was to appoint a county engineer by the name of Hugh Howell to oversee civic projects like the Hāna Belt Road. Replacement of the bridges was of utmost importance to the Hāna Belt Road project since "many of the [existing] bridges had deteriorated from rot and had trusses that were considered dangerous" (Duensing 2005:30). Howell's program of replacing the truss type bridges with concrete pier-type bridges was first implemented across ‘Ohe‘o Gulch amounting to a 70 foot span. Although construction of these new type of bridge foundations were expensive, Howell argued that it represented an economic reconstruction since concrete piers required less maintenance than the trusses, which reduced necessary maintenance cost from an estimated $50 per year to $5 per year. Part of these savings in maintenance also originated in Howell's use of crude oil and carbolineum to help protect the wooden superstructure against the moist tropical air and environment (Duensing 2005).

Construction of the road was slow for several years as the existing funding for the project was extremely limited and insufficient, having originated at that time from small amounts of money parceled out yearly by the government for the completion of consecutive sections of the road. This financial difficulty combined with the physical difficulty of building the road had the project approximately 10 years behind schedule by 1909. The formation of the Maui Loan Fund Commission (MLFC) in 1911 enabled the project to move forward with a more permanent capital improvement by replacing all timber bridges with concrete. The formation of the MLFC and the regularity of funding enabled the construction of the first several concrete bridges enumerated among the Hāna Highway Historic District. The bridges constructed during the initial implementation of this funding were those named: Waikomai, Kōlea, Honomanū, Nua‘ailua, Mo‘omonui, Waiakoi, Pa‘ihi, South Wailua (Honolewa), and Koukou‘ai (Duensing 2005).

By 1920, the project saw the completion of many additional concrete bridges to the belt road, however, the belt road itself was far from complete as it still did not connect at several points. Also, during 1920, the MLFC decided that it would suspend funding for the Hāna Belt Road for a few years to allocate funds to roads nearer the Central Isthmus that were seasonally inhibiting pineapple harvests due to poor conditions. The suspension of the belt road project continued until 1923 when Maui's business and civic leaders, along with the Hawai‘i governor Wallace Farrington, became proponents of a resurgence of civic interest in the project. This revitalized interest fueled a massive organized effort to complete the section of the road from Kailua to Ke‘anae, which was completed by its projected finish date in 1925 (Duensing 2005).

The construction of the next section of the Hāna Belt Road began shortly after the completion of the Kailua to Ke‘anae section and was boosted by a substantial bond from President Calvin Coolidge issued to the Territory of Hawai‘i that included $150,000 for completion of the proposed 3.5 mile stretch from Ke‘anae to Wailua Iki. This stretch would prove to be the most difficult portion of road to create due to the many serried ridges of hard volcanic stone that had to be blasted through, and because of the occasional slipping of steam shovels into deep gorges and mechanical issues associated with their employment in the process of rock breaking. Occasional flooding and landslides were also a discouraging element of constructing the belt road, having been responsible

for several instances of burying the steam shovels under their downslope aftermath. The final stretch of road was completed with the construction of Wailuanui Bridge in 1926, which had itself been setback by a landslide that sent 600 bags of concrete needed for its construction coursing down the adjacent gulch and out to sea (Duensing 2005). The Hāna Belt Road was completed and opened to the public in 1926 and effectively ended Hāna District's centuries of geographic isolation from the rest of the island. Although the public had begun travelling the road, several bridges were operational but incomplete. All the original bridges that comprise the historic road were not completed until 1947, and the road itself lacked a complete pavement up until the 1960s (Duensing 2005).

The type of component structures of the Hāna Historic District consist mostly of bridges and culverts including masonry arch bridges, concrete bridges, concrete arch bridges, and stone and concrete culverts. Since the road had been scarcely maintained since the final paving of the surface in 1962, it had been ravaged by the passing of time, showing few contemporary improvements aside from the addition of guardrails and pavement patch on the road surface.

In the 1990s, the State of Hawai‘i responded to the need to repair the Hāna Belt Road and implemented a preservation plan for the entire length of state-owned road between Huelo and Hāna. The preservation plan called not for the preservation of the bridges themselves, but instead sought to retain the "character" of the road with its narrow bridges and winding cliffside roads. This proved to be a challenge as the funds offered by the Federal Highway Administration (FHWA) required the roads to be widened to their standard widths of 36 feet, with some of the existing roads only being about 16 feet wide. Ultimately the historic width of the bridges was allowed to remain narrow, conditional upon approval by the FHWA on a case-by-case basis. As a result of this ongoing maintenance work the historic district has been thoroughly researched and described in detail by multiple studies (Duensing 2001, 2005; McCurdy et al. 2014; MKE Associates LLC and Fung Associates 2013; Nagamine Okawa Engineers Inc. and Fung Associates 2015; Oceanit 2000; Wilson Okamoto & Associates 2001)

Ultimately, the Hāna Belt Road was deemed a historic property of significance (State Inventory of Historic Places [SIHP] # 50-50-13-01638) due to the efforts and achievements surrounding its construction. Duensing (2005:55-56) clarifies the roads effect on the region:

> The Hāna Belt Road was a substantial public works achievement…during an era when Maui, especially Hāna , was quite isolated from the rest of the world… the Hāna Belt Road also involved the expertise of highly trained engineers and designers…Although some of the construction work was contracted out, county employees did nearly all the design and engineering work. (Duensing 2005:55-56)

In that the Hāna Belt Road still serves its original function of connecting isolated Hāna to the central plains, and that it has undergone very little cosmetic changes in the ensuing 70 years since its construction, it has a preserved character and function that has changed very little since its construction. Although the Hāna Belt Road was constructed to more sufficiently connect and develop the remote eastern side of the island, the opposite effect has been documented because of the narrow winding nature of the historic highway. Duensing (2005:59) clearly illustrates this point as follows:

> The lack of easily-travelled, high-speed traffic artery has served to impede substantial development…There are no fast food chain restaurants, chain stores,

> strip malls or sprawling subdivisions along the Hāna Belt Road. Travelers…are served by the occasional roadside stand and must drive all the way to Hāna for limited conveniences such as groceries, gas, and restaurants. With a sizeable population of residents of Hawaiian ancestry, Hāna is often cited as Maui's "most Hawaiian community". (Duensing 2005:59)

By way of reduced efficiency of travel to the Hāna region, a problem the Hāna Belt Road had originally intended to rectify, the east side of the island has developed at a significantly slower pace than the vacation communities located on the southern and western shores of Maui. The novel architectural features of an early twentieth century road combined with an awe-inspiring slow drive through densely vegetated jungle and deep gulches have afforded the Hāna Belt Road a character uncommon in most civic projects of the early twentieth century. As such, the Hāna Belt Road was later deemed the Hāna Historic District and afforded protection on behalf of the United States Government and placed on the National Register of Historic Places in 2001 (Yucha and Hammatt 2017).

### 2.1.6 Contemporary Land Use

Current land use patterns in Hāna, Maui reflect growing tourism and capital gains investment land tenure. In 2001, Meridian divided its assets, selling the hotel properties to Passport Resorts and the ranch properties (including 4,500 acres) to Hāna Ranch Partners (HRP), a mainland investment group based in San Francisco and Montana. In 2009, Passport Resorts sold the hotel to OHāna Hotel (managed through Vermont based Arden Grove Hospitality. In 2010, the hotel was sold to Amstar (a Denver based real estate investment company) through its Denver based subsidiary Green Tea LLC which operates Travaasa Destinations group. Finally, in 2010, the Hotel Hāna Maui was renamed Travaasa Hotel and since 2020 is now called Hāna -Maui Resort.

In 2002, HRP sold 102 acres of coastal pastureland to Oprah Winfrey and Bob Green and converted 41 acres at Maka‘alae and 4 acres designated as Kakio I to conservation. In 2013, they sold the Hāna Ranch facilities, including 3,600 acres of ranch land and two water supply companies to Bio-Logical Capital of Colorado. In 2014, HRP converted an additional 10 acres at Kakio II to conservation (www.saveHāna coast.org).

## 2.2 **Previous Archaeological Research**

The earliest archaeological studies on the island of Maui were a part of island-wide surveys conducted in the early 1900s (Stokes 1917; Walker 1931). These studies tended to focus on producing descriptive lists of large-scale architecture or traditional ceremonial *heiau* sites. Archaeological studies occurred on a more frequent basis following the passage of the National Historic Preservation Act in 1966 and HRS §6E, which established the Historic Preservation Program in 1976.

Previous archaeological studies conducted in the immediate vicinity (approximately 600 m radius) of the project area include archaeological reconnaissance surveys, LRFI surveys, AIS investigations, and archaeological monitoring programs (Figure 13 and Table 2). Overall, previous archaeological research in the immediate vicinity of the project area document various historic properties including *heiau*, a human burial, and historic refuse pits and artifact scatters (Figure 14).

### 2.2.1 Walker (1931)

In 1928 and 1929, Walker (1931) conducted surveys of *heiau* on Maui and recorded four *heiau* in the vicinity of the current project area. Three of the sites were documented on the Keanini Point peninsula near the current project area: Walker Site 0105 (SIHP # 50-50-13-00105), Kaniomoku Heiau, Walker Site 0111 (SIHP # 50-50-13-00111) Honuaula Heiau, and Walker Site 0112 (SIHP # -00112) Kuawalu Heiau. Walker Site 0108 (SIHP # -00108) is an Unnamed Heiau on Nānu‘alele Point. The *heiau* were described by Walker (1931) as follows:

Walker Site 0105, Kaniomoku Heiau

> Location: The cane lands above the road.
>
> Description: Kaniomoku is mentioned by Thrum as the place where Kaahumanu spent her childhood. Her birthplace was in a large cave on the side of Kauiki Hill on the bay. The heiau has been totally destroyed. (Walker 1931:181)

Walker Site 0108, Unnamed Heiau

> Name: Unknown
>
> Location: On Keanini Point beyond the factory, 100 feet from the shore.
>
> Description: A small heiau probably of the Kuula class. It is little more than a level spot in the lava, 30 x 35 feet. The front is toward the bay, and a line of stones marks the edge of a step terrace. On the east a natural rock ledge forms a wall, and there are indications of a small terrace below it. The back is formed by a platform 3 feet high, 10 feet wide, and 35 feet long. A large part of the interior of the heiau is occupied by a double platform whose edges do not coincide with the edge of the terrace. It is likely a burial platform. Large pieces of Aa make up the terrace with beach stones used for the divisions. Few pieces of coral seen. (Walker 1931:183)

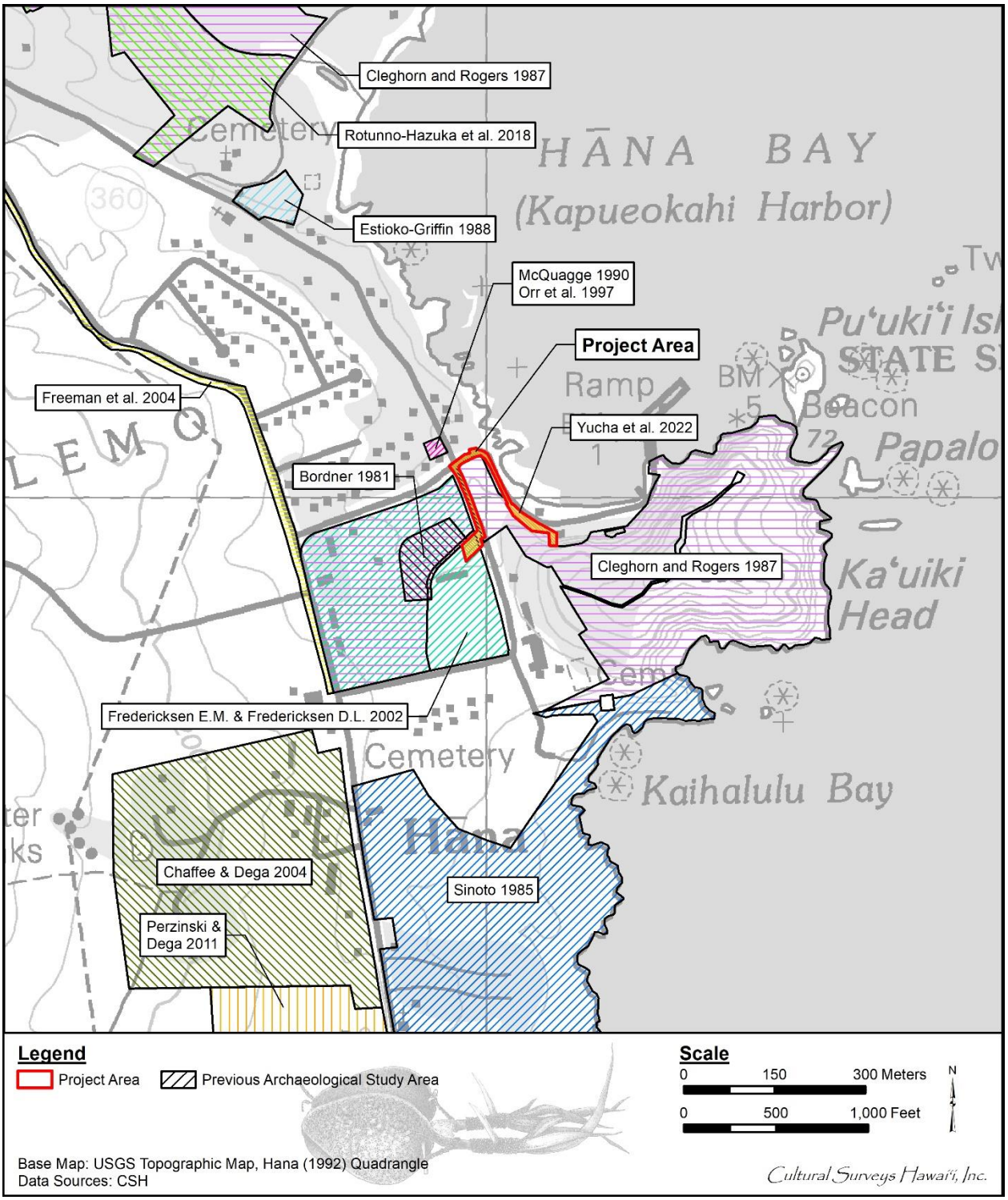


Figure 13. Portion of the 1992 Hāna USGS 7.5-minute topographic quadrangle showing previous archaeological studies in the vicinity of the project area (U.S. Geological Survey 1992)

Table 2. Previous archaeological studies in the vicinity of the project area

| Reference | Type of Study | Location | Results (SIHP # 50-50-13) |
|---|---|---|---|
| Bordner (1981) | Archaeological reconnaissance and subsurface testing | Hotel Hāna ; TMK: [2] 1-4-004:022 | No historic properties identified |
| Sinoto (1985) | Archaeological reconnaissance survey | Hāna Ranch; TMKs: [2] 1-4-003:003 and [2] 1-4-004:016 and 017 | No historic properties identified |
| Cleghorn and Rogers (1987) | Preliminary archaeological and historical investigation | Hāna ranch lands | Recorded 48 archaeological sites; approximately 20 sites destroyed due to sugarcane cultivation; remaining sites appear disturbed to varying extents |
| Estioko-Griffin (1988) | Field inspection | Hāna Agricultural Park (Kalo Road), Kaeleku, Hāna ; TMKs: [2] 1-3-009:020, 021 | Inspected the entrance of a known lava tube (SIHP # -01813), but deemed unsafe to investigate the bottom |
| McQuagge (1990) | Archaeological subsurface testing | Hāna, Maui; TMKs: [2] 1-4-013:014, 015 | Encountered midden and historic artifacts from a previous dwelling; no SIHP number assigned |
| Orr et al. (1997) | Archaeological subsurface testing | Parcel adjacent to the Hāna Cultural Center; TMKs: [2] 1-4-013:014, 015 | No historic properties identified |
| Fredericksen and Fredericksen (2002) | Archaeological monitoring | Hāna Ballpark, Wananalua; TMK: [2] 1-4-004:021 | Documented SIHP # -05190, a recently disturbed human burial, and traditional stone artifacts |
| Chaffee and Dega (2004) | AIS | Hāna Town Center, Wananalua; TMK: [2] 1-4-003:056 | Identified SIHP # -05546, historic refuse pit |
| Freeman et al. (2004) | Archaeological monitoring | Hāna Highway improvements, Huelo to Hāna ; TMKS: [2] 2-1-001, 002, 003, [2] 2-1-004:001-005, [2] 2-2-009:005, 006, 009, 010, 012, 013 | No historic properties identified |

| | | | |
|---|---|---|---|
| Perzinski and Dega (2011) | AIS | 10-acres in Hāna, Oloewa; TMK: [2] 1-4-003:009 (por.) | Identified SIHP # -06807, basalt cobble and boulder historic terrace |
| Rotunno-Hazuka et al. (2018) | AIS | 20-acre parcel, Kawaipapa; TMK: [2] 1-4-006:014 (por.) | Documented nine historic properties comprised of 70 possible features:<br>SIHP # -06069, a previously identified historic boundary wall;<br>SIHP # -07112, 13 features associated with historic to modern animal husbandry, agriculture, and habitation;<br>SIHP # -07113, historic boundary wall containing 11 features;<br>SIHP # -07114, 17 features associated with animal husbandry and agriculture;<br>SIHP # -07115, pre- to post-Contact multi-occupation site with seven features;<br>SIHP # -07116, possible historic to modern agricultural area with eight features;<br>SIHP # -07117, probable pre-Contact to historic habitation complex with seven features;<br>SIHP # -08316, pre-Contact to historic temporary habitation site with three features;<br>SIHP # -08317, a historic religious site with three features including a historic burial |
| Yucha et al. (2022) | LRFI | Helene Hall Septic System; TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way | No historic properties identified |

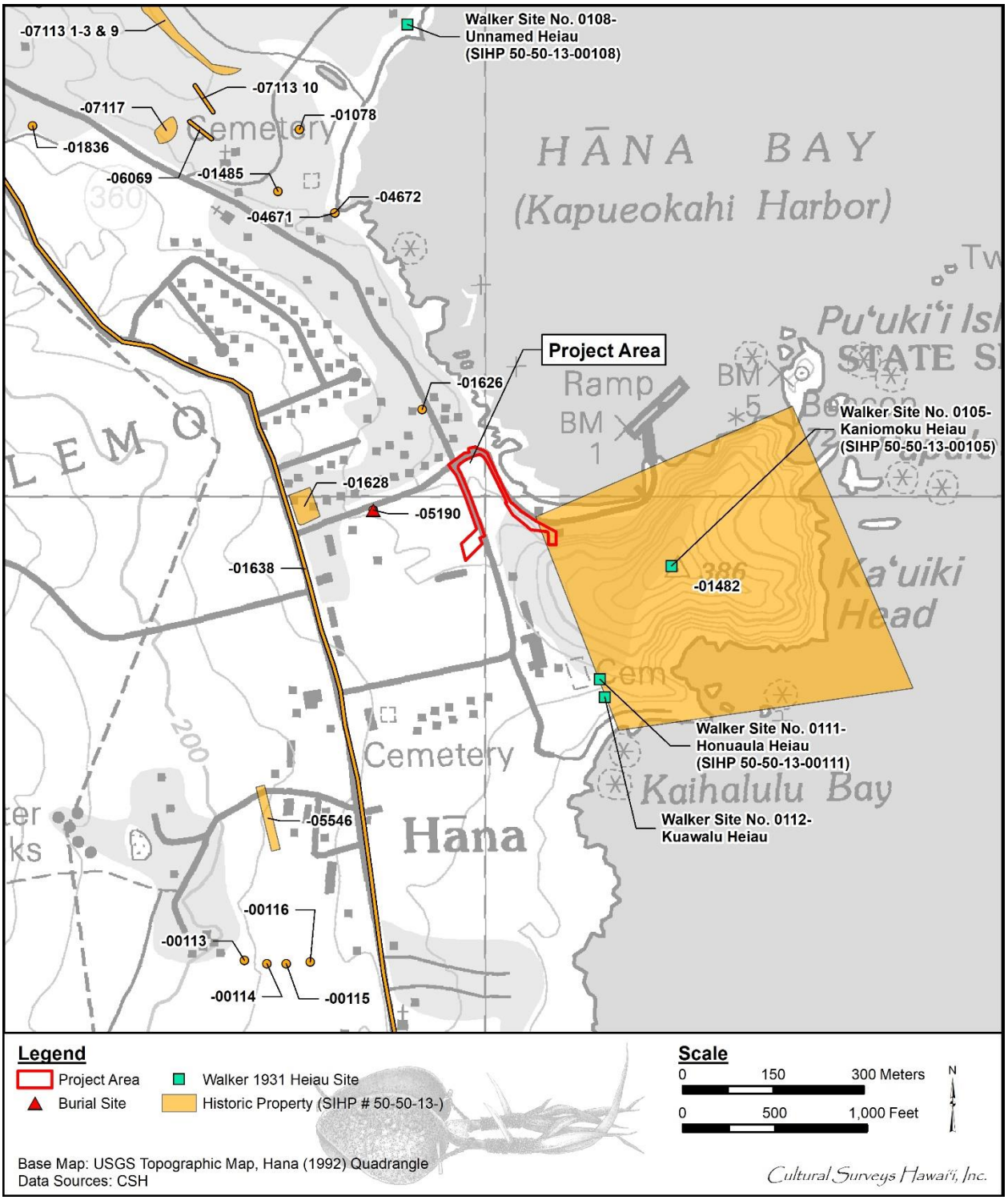


Figure 14. Portion of the 1992 Hāna USGS 7.5-minute topographic quadrangle showing previously identified historic properties in the vicinity of the project area (U.S. Geological Survey 1992)

Walker Site 0111, Honuaula Heiau and Walker Site 0112 Kuawalu Heiau

Names: Honuaula, Kuawalu

Location: Base of Kauiki Hill

Description: Two war heiaus built by King Hua-a-Pohukaina of Lahaina sometime during the early part of the 12th Century. Thrum in his 1917 list speaks of Honuaula being built prior to the raid on Hawaii. On his successful return he built Kuawalu, said to have measured 70 x 120 feet. All traces of both are now destroyed. This is presumably the same King Hua that built the heiaus of Waiie and Luakona at Lahaina. He is referred to in legend as the infamous ruler who put his chief priest to death and himself died miserably of famine with all his people as a result. (Walker 1931:186)

### 2.2.2 Bordner (1981)

In 1981, the Environmental Impact Study Corp. (EISC) conducted an archaeological reconnaissance survey with subsurface testing for a proposed expansion of the Hotel Hāna -Maui (Bordner 1981). The study area was located immediately west of the southwestern portion of the current project area. Bordner (1981) noted that the area was in use as a miniature golf course and plant nursery. While the location and depth of the excavations are not provided in the report, subsurface testing in the study area documented a dark-stained clay layer with limited topsoil formation. No historic properties were identified. Bordner (1981) recommended no further work based on extensive recent land modifications for sugarcane cultivation and the golf course.

### 2.2.3 Sinoto (1985)

On 21 September 1985, the Bishop Museum conducted an archaeological reconnaissance survey of Hāna ranch lands (TMKs: [2] 1-4-003:003 and [2] 1-4-004:016 and 017) for the development of garden cottages on the property (Sinoto 1985). SIHP # 50-50-13-01482, Ka‘uiki Hill, is located directly northwest of the survey area. Due to the significance of the historic property, archaeologists conducted a survey to identify possible surface sites. No historic properties were identified.

### 2.2.4 Cleghorn and Rogers (1987)

In 1987, the Bernice Pauahi Bishop Museum (Cleghorn and Rogers 1987) conducted preliminary historical and archaeological investigations of Hāna Ranch lands within a portion of the current project area. The study reported that 48 archaeological sites had been previously recorded within the ranch lands, primarily *heiau* structures, but 20 have been destroyed likely because of sugarcane cultivation. The previously identified sites includes SIHP # -01482, Ka‘uiki Hill, which is shown as the entire peninsula on Figure 14, including a portion of the current project area. Aerial images were referenced to locate and field reference an additional 16 sites during the study, which were noted as having probably agricultural or habitation functions.

No archaeological sites were identified in the current project area during the study. Among several general recommendations, the 1987 study recommended that all ranch lands be surveyed, all archaeological sites be recorded, and selected sites should be excavated to provide important information on site function and settlement chronology.

### 2.2.5 Estioko-Griffin (1988)

On 11 November 1988, the Department of Land and Natural Resources (DLNR) conducted a field inspection of SIHP # 50-50-13-1813, a lava tube, in Kaeleku, Hāna (TMK: [2] 1-3-09:20 and 21) (Estioko-Griffin 1988). The landowner had requested the inspection and noted an interest in opening the cave to the public. The area had extensive previous disturbance from sugarcane cultivation. Entry into the bottom of the lava tube was deemed unsafe by the current means of a rope and hog-wire fencing tied to a tree. Besides litter and likely cow bones, no structures were visible at the bottom. The archaeologists recommended a more detailed study of the interior prior to opening the cave to the public.

### 2.2.6 McQuagge (1990)

In 1990, Richard L. McQuagge conducted an archaeological investigation for the Hāna Cultural Center (HCC) traditional Hawaiian house replica construction (TMKs: [2] 1-4-013:014 and 015) (McQuagge 1990). A house had once stood in the eastern portion of the property. Nine test pits, each 1-x-1 m square, were hand excavated (Pit #s 1–9). Surface *‘opihi* (limpets) and cowry middens, faunal remains, and historic artifacts were identified. Pit # 7 contained a rubbish pit, and the excavation area was expanded to further investigate the extent and contents. The rubbish pit contained a large majority of oriental artifacts such as rice bowls and medicine bottles. Pit # 8 contained a solid layer of intact glass bottles from the 1940s and 1950s. No historic properties were designated. Archaeological monitoring was recommended for future ground disturbance.

### 2.2.7 Orr et al. (1997)

From 24 June through 26 June 1995, CSH conducted an archaeological survey with subsurface testing of two parcels (TMKs: [2] 1-4-013:014 and 015) that adjoin the property of the HCC Museum (Orr et al. 1997). An amorphous rectangular stone mound located beneath a *ti* hedge was identified as possibly containing a burial, which was supported by testimony from a local resident. The HCC agreed to preserve and maintain the location. A total of four trenches (Trench 1, 3, 4, and 5) three shovel tests (Shovel Test 1–Shovel Test 3), and five test units (Test Unit 1–Test Unit 5) were excavated around the property. Post-WWII materials were recorded. No evidence of prehistoric Hawaiian occupation was encountered, and no historic properties were identified during subsurface testing.

### 2.2.8 Fredericksen and Fredericksen (2002)

In January and February 2002, Xamanek Researches conducted archaeological monitoring for lighting installation at the Hāna Ballpark following the discovery of a human burial (Fredericksen and Fredericksen 2002). The burial had been inadvertently disturbed during a lighting excavation in December 2001. The SHPD had been notified of the find and an archaeologist was contracted to fulfill an archaeological monitoring program. The burial was assessed as previously *in situ* and designated as SIHP # 50-50-13-05190. The burial was preserved in place beneath a concrete cap.

The study area is in the southwestern portion of the current project area. Project related ground disturbance included four light pole footing excavations and an electrical trench. Further monitoring of the excavations encountered several traditional and historic artifacts including a hammerstone, a hammerstone/chopper, and a pecking stone.

### 2.2.9 Chaffee and Dega (2004)

On 16 and 17 December 2003, Scientific Consultant Services, Inc. (SCS) conducted an AIS of approximately 37 acres for the Hāna Town Center (TMK: [2] 1-4-003:056) (Chaffee and Dega 2004). Seven backhoe trenches (Stratigraphic Trenches [ST]-1 through ST-7) were excavated in two general locations within the project area. A historic-era refuse pit (SIHP # 50-50-13-05546) was present in ST-4 and ST-5. The contents primarily consisted of bottle glass. Archaeological monitoring was recommended.

### 2.2.10 Freeman et al. (2004)

From June through August 2004, CSH conducted archaeological monitoring in three locations for the Hāna Highway Improvements between Huelo, Makawao District, and Hāna (TMKs: [2] 2-1-001, -002, -003, [2] 2-1-004:001–005, [2] 2-2-009:005, 006, 009, 010, 012, 013) (Freeman et al. 2004). Construction involved excavations of the roadway and gutters. Improvements have occurred at these locations on a continual basis due to rainfall erosion. No historic properties were identified.

### 2.2.11 Perzinski and Dega (2011)

On 21 October 2010, SCS conducted an AIS of approximately 10 acres in Hāna (TMK: [1] 1-3-004:009) for the construction of a senior housing project (Perzinski and Dega 2011). SIHP # 50-50-13-06807 was identified as a historic terrace constructed of basalt cobbles and boulders in the northwestern corner of the project area.

### 2.2.12 Rotunno-Hazuka et al. (2018)

In 2018, Archeological Services Hawaii, LLC. (ASH) conducted an AIS for an agriculturally zoned parcel on Kawaipapa (Rotunno-Hazuka et al. 2018). Nine historic properties with 70 possible component features were documented, including one previously identified historic property, SIHP # 50-50-13-06069, a historic boundary wall. Historic burials represented 2% of the total finds. The newly identified historic properties were assessed as follows:

1. SIHP # -07112, 13 features associated with historic to modern animal husbandry, agriculture, and habitation,
2. SIHP # -07113, historic boundary wall containing 11 features,
3. SIHP # -07114, 17 features associated with animal husbandry and agriculture,
4. SIHP # -07115, pre- to post-Contact multi-occupation site with seven features,
5. SIHP # -07116, possible historic to modern agricultural area with eight features,
6. SIHP # -07117, probable pre-Contact to historic habitation complex with seven features,
7. SIHP # -08316, pre-Contact to historic temporary habitation site with three features, and
8. SIHP # -08317, a historic religious site with three features including a historic burial.

### 2.2.13 Yucha et al. (2022)

In August 2022, CSH completed a LRFI study for the Helene Hall Septic System Improvements Project to determine the likelihood that historic properties may be affected by the project, and based on findings, consider cultural resource management recommendations (Yucha et al. 2022). The study included detailed historical, cultural, and archaeological background research, archaeological observation of geotechnical borings, a GPR survey of selected portions of the project area, and a field inspection of the project area. No historic properties were identified within

the project area during the field inspection, however, CSH observed retaining walls along portions of Uakea Road and Keawa Place that are likely more than 50 years old and outside of the project area. CSH also observed a mortared basalt and formed concrete drainage channel along the southern edge of Keawa Place that appears to be less than 50 years old based on construction style. A GPR survey of three locations within or near the project area identified one linear anomaly within Grid # 2 at 1.0 m below surface that may also be associated with an overlying backfilled excavation.

# Section 3 Archaeological Monitoring Provisions

Under Hawai‘i State historic preservation legislation, “Archaeological monitoring may be an identification, mitigation, or post-mitigation contingency measure. Monitoring shall entail the archaeological observation of, and possible intervention with, on-going activities, which may adversely affect historic properties” (HAR §13-279-3).

Hawai‘i State historic preservation legislation governing archaeological monitoring programs requires that each monitoring plan discuss eight specific items (HAR §13-279-4). The monitoring provisions below address these eight requirements in terms of archaeological monitoring for the excavations within the current project area.

1) Anticipated Historic Properties:

   No historic properties have been previously documented within the project area. A field inspection of the project area (Yucha et al. 2022) observed retaining walls along portions of Uakea Road and Keawa Place that are likely more than 50 years old, however these walls were confirmed to be outside of the project area. There is a potential for the identification of previously undocumented subsurface historic properties during project-related ground disturbance.

2) Locations of Historic Properties:

   No historic properties have been previously documented within the project area.

3) Fieldwork:

   On-site archaeological monitoring for identification purposes will be conducted for all project-related ground disturbance. One archaeological monitor will be assigned to each area of ground-disturbing activity throughout the project area. Any departure from this will occur only following consultation with and written concurrence from the SHPD.

   The monitoring fieldwork will likely encompass the documentation of subsurface archaeological deposits (e.g., trash pits, structural remnants) and will employ current standard archaeological recording techniques. This will include drawing and recording the stratigraphy of excavation profiles where cultural features or artifacts are exposed as well as representative profiles. Stratigraphic profiles will be recorded in at least 2.0-m lengths, as possible. These exposures will be photographed, located on project area maps, and sampled. Photographs and representative profiles of excavations will be taken even if no historically significant sites are documented. As appropriate, sampling will include the collection of representative artifacts, bulk sediment samples, and/or the on-site screening of measured volumes of feature fill to determine feature contents.

   GPS data collection shall be conducted with a receiver capable of sub-meter accuracy and located on project area maps.

   In the event of significant finds, the SHPD will be notified. If human remains are identified, construction activity in the vicinity will be stopped and no exploratory work of any kind will be conducted unless specifically requested by the SHPD. All human skeletal remains

that are encountered during excavation will be handled in compliance with HAR §13-300 and HRS §6E-43.

4) Archaeologist’s Role:

The monitoring archaeologist will have the authority to stop work immediately in the area of any findings so that documentation can proceed, and appropriate treatment can be determined. In addition, the archaeologist will have the authority to slow and/or suspend construction activities in order to ensure that the necessary archaeological sampling and recording can take place.

5) Coordination Meeting:

Before work commences on the project, the on-site archaeologist shall hold a coordination meeting to orient the construction crew to the requirements of the archaeological monitoring program. Copies of the Final AMP will be provided to the project proponent, construction crew, and archaeological monitors. At this meeting the monitor will emphasize his or her authority to temporarily halt construction and state that all finds (including objects such as bottles) are the property of the landowner and may not be removed from the construction site. At this time, it will be made clear that the archaeologist must be on site during all subsurface excavations.

6) Laboratory Work:

Laboratory work will be conducted in accordance with HAR §13-279-5(6). Laboratory analysis of non-burial related finds will be tabulated and standard artifact and midden recording will be conducted as follows. Artifacts will be documented as to provenience, measurements, weight, type of material, and presumed function. Photographs of representative artifacts will be taken for inclusion in the archaeological monitoring report. Bone and shell midden materials will be sorted down to species, when possible, and then tabulated by provenience.

As appropriate, collected charcoal material obtained within intact cultural deposits will be analyzed for species identification. Charcoal samples ideal for dating analyses will be sent to Beta Analytic, Inc. for radiocarbon dating. If appropriate, artifacts may be sent to the University of Hawai‘i-Hilo Geoarchaeology Lab for Energy-Dispersive X-ray Fluorescence (EDXRF) analysis in order to identify and possibly geographically locate the source material. All analyzed samples, provenience information, and results will be presented in table form within the archaeological monitoring report.

7) Report Preparation:

The report will be prepared within 60 days of the end of archaeological monitoring fieldwork and will contain sections on monitoring methods, archaeological results, stratigraphy, and results of laboratory analyses, and it will present a synthesis of these results. The report will address the requirements of a monitoring report (pursuant to HAR §13-279-5). Photographs of excavations will be included in the monitoring report even if no historically significant sites are documented. Should burial treatment be completed as part of the monitoring effort, a summary of this treatment will be included in the monitoring report. Should burials and/or human remains be identified, CSH will provide all appropriate

additional written documentation (e.g., letters, memos, reports) that may be requested by the SHPD.

8) Archiving Materials:

All burial materials will be addressed in accordance with SHPD directives. Materials not associated with burials will be temporarily stored at the CSH Maui office until an appropriate curation facility is selected, in consultation with the landowner and the SHPD. All data generated will be stored at the CSH offices.

# Section 4 References Cited

Alexander, W.D.

1890 A Brief History of Land Titles in the Hawaiian Kingdom. In *Hawaiian Almanac and Annual for 1891: A Hand Book of Information on Interesting Matters Relating to the Hawaiian Islands*, Vol Seventeen, edited by Thos. G. Thrum, pp. 105-124. Press Publishing Company Print, Honolulu.

Beckwith, Martha W.

1970 *Hawaiian Mythology*. University of Hawai‘i Press, Honolulu.

Bishop, S.E.

1861 *Report to the Board of Sandwich Islands Mission*. Hawaiian Mission Children's Society, Honolulu, Hawai‘i.

Bordner, Richard

1981 *Archaeological Reconnaissance and Subsurface Testing, Hotel Hāna -Maui Expansion (TMK 1-4-04:22)*. Copies available from Environmental Impact Study Corp., Wananalua, Hawai‘i.

Borthwick, Douglas, Jennifer Robbins, and William H. Folk

1992 *Archaeological Inventory Survey and Subsurface Testing for the Proposed Hāna Ranch County Club, Hāna Maui, Hawaii (TMK: 1-4-07:4, 6; 1-4-02:8, 9, 10, and 1-4-03:9)*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Chaffee, David B., and Michael F. Dega

2004 *Hāna Town Center Project Inventory Survey Wananalua Ahupua‘a, Hāna District, Hāna, Maui Island Hawai‘i [TMK: 1-4-03: 056]*. Copies available from Inc. Scientific Consultant Services, Honolulu.

Chinen, Jon J.

1958 *The Great Mahele: Hawaii's Land Division of 1848*. University of Hawai‘i Press, Honolulu.

Cleghorn, Paul L., and Kathie Rogers

1987 *Preliminary Historical and Archaeological Investigations of Hāna Ranch Lands, Maui, Hawaiian Islands*. Bernice Pauahi Bishop Museum, Honolulu.

Condé, Jesse C., and Gerald M. Best

1973 *Sugar Trains: Narrow Gauge Rails of Hawaii*. Glenwood Publishers, Felton, California.

Cordy, Ross

2000 *Exalted Sits the Chief*. Mutual Publishing, Honolulu.

Daily Honolulu Press.

1883 Reminiscenses of Honolulu. *Daily Honolulu Press* Saturday 10 February:1. Honolulu, Hawai‘i.

Daws, Gavan

1968 *Shoal of Time: A History of the Hawaiian Islands*. University of Hawai‘i Press, Honolulu, Hawai‘i

Duensing, Dawn E.

2001 *National Register of Historic Places Registration Form: Hāna Belt Road*. National Park Service, United States Department of the Interior, Hawai‘i

2005 *Historic American Engineering Record: Hāna Belt Road*. National Park Service, United States Department of the Interior, Washington, D.C.

Esri, Inc.

2018 *Map Image Layer*. Satellite and aerial imagery for ArcGIS; Raster. Esri, Inc. Redlands, California.

Estioko-Griffin, Agnes

1988 *Field Inspection of Site 50-13-1813, Lava Tube, Kaeleku, Hāna Maui TMK 1-3-09:20, 21*. State of Hawai‘i Department of Land and Natural Resources, State Historic Preservation Division, Honolulu, Hawai‘i.

Foote, Donald E., Elmer L. Hill, Sakuichi Nakamura, and Floyd Stephens

1972 *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. Soil Conservation Service, United States Department of Agriculture, Washington, D.C.

Fornander, Abraham

1880 *An Account of the Polynesian Race, its Origins and Migrations, and the Ancient History of the Hawaiian People to the Times of Kamehameha I*. 6 vols. Trubner & Co., London.

1919 *Fornander Collection of Hawaiian Antiquities and Folk-Lore: The Hawaiians' Account of the Formation of Their Islands and Origin of Their Race, with the Traditions of Their Migrations, Etc., as Gathered from Original Sources. Second Series.* Memoirs of the Bernice Pauahi Bishop Museum of Polynesian Ethnology and Natural History. Bishop Museum Press, Honolulu.

1969 *An Account of the Polynesian Race: Its Origins and Migrations*. Charles Tuttle, Rutland, Vermont.

Fredericksen, Erik M.

2015 *An Archaeological Monitoring Plan for the Hāna Ball Park Restroom Septic System Improvements for the Existing Wastewater System, County Job No: P13/017, TMK: (2) 1-4-004:021 (Portion)*. Submitted to Xamanek Researches, LLC, Pukalanu, Maui.

Fredericksen, Erik M., and Demaris L. Fredericksen

2002 *Archaeological Monitoring Report for the Lighting Installation Project for the Hāna Ballpark, Wananalua Ahupua‘a, Hāna District, Island of Maui (TMK: 1-4-04: 21)*. Submitted to Xamanek Researches, Pukalani, Hawai`i.

Freeman, Sallie D.M., Holly Formolo, and Hallett H. Hammatt

2004 *An Archaeological Monitoring Report for Hāna Highway Improvements Huelo to Hāna, M.P. 4.20 to 23.70 Districts of Makawao (Hāmākualoa and Ko'olau) and Hāna , Island of Maui (TMK: 2-1-1; 2-1-2; 2-1-3; 2-1-4;01-05; and 2-2-9:05, 06, 09, 10, 12, 13)*. Cultural Surveys Hawai'i, Inc., Wailuku, Hawai'i.

Giambelluca, Thomas W., Q. Chen, A.G. Frazier, J.P. Price, Y.L. Chen, P.S. Chu, J.K. Eischeid, and D.M. Delparte

2013 Online The Rainfall Atlas of Hawai‘i. In *Bull. Amer.Meteor. Soc.*, pp. 313-316. Vol. 94. University of Hawai‘i at Mānoa, Honolulu.

Giambelluca, Thomas W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger

2014 Evapotranspiration of Hawai‘i. Final report submitted to the U.S. Army Corps of Engineers—Honolulu District, and the Commission on Water Resource Management, State of Hawai‘i. University of Hawai‘i at Mānoa, Honolulu.

Google Earth

2015 *Google Earth Aerial Imagery*.

Green, Jonathan S.

1857 Editorial. *The Pacific Commercial Advertiser* Thursday 5 November:1. Honolulu, Hawai‘i.

Griffin, P. Bion, D.T P. Keene, and Joseph Kennedy

1987 *Kaka‘ako: Prediction of Sub-Surface Archaeological Resources, Kaka‘ako Community Development District, Archaeological Reconnaissance Survey*. University of Hawai‘i-Mānoa, Honolulu, Hawai‘i.

Hawaii TMK Service

2014 *Tax Map Key [2]*. Hawaii TMK Service. Honolulu.

Howell, H.

1901 *Map of Hāna Landing and Vicinity, Maui (RM 2208)*.

Jackson, George E. Gresley

1882 *Kaunakakai Harbor -- Working Sheet*, 1:200. Hawaiian Government Survey. Honolulu, Hawai‘i.

Judd, Albert F., II, Bernice Judd, Barbara S. Wilcox, and Elizabeth G. Alexander

1969 *Missionary Album*. Sesquicentennial Edition. Hawaiian Mission Children's Society, Honolulu.

Kamakau, Samuel Mānaiakalani

1961 *Ruling Chiefs of Hawaii*. Kamehameha Schools Press, Honolulu.

1992 *Ruling Chiefs of Hawaii*. Revised ed. The Kamehameha Schools Press, Honolulu.

King, Robert D.

1931 *Map of Hāna Village and Harbor, District of Hāna , Island of Maui*.

Kipahulu Sugar Co.

1919 *Sugar Mill, Hāna , Maui*.

Kirch, Patrick V.

2012 *A Shark Going Inland is My Chief: The Island Civilization of Ancient Hawai'i*. University of California Press, Berkeley, California.

Kuykendall, R.S.

1938 *The Hawaiian Kingdom: 1778-1854, Foundation and Transformation*. University of Hawaii Press, Honolulu.

Lucas, Paul F. Nahoa (editor)

1995 *A dictionary of Hawaiian legal land-terms*. Native Hawaiian Legal Corp. : University of Hawai°i Committee for the Preservation and Study of Hawaiian Language, Art, and Culture, Honolulu.

Macfarlane, E.C.

1892 Proclamation. *The Daily Bulletin* Tuesday, 4 October 1892:2. Honolulu, Hawai‘i

MacLennan, Carol A.

1995 Foundations of Sugar's Power: Early Maui Plantations, 1840-1860. *The Hawaiian Journal of History* 29:33-56.

McAllister, J. Gilbert

1933 *Archaeology of Oahu*. Copies available from Bernice Pauahi Bishop Museum, Honolulu.

McCurdy, Todd D., Tanya L. Lee-Greig, and Hallett H. Hammatt

2014 Literature Review and Field Inspection for the Proposed Hāna Highway Improvements, Huelo to Hāna, Phase II, Project, Makaīwa Ko‘olau Ahupua‘a, Hāna District, Maui Island TMK: [2] 1-1-001:999; [2] 1-1-002:999; [2] 1-1-007:999; [2] 1-1-008:999; [2] 1-1-009:999 and [2] 1-2-001:999 (pors). Cultural Surveys Hawaii, Wailuku, HI.

McGregor, Davianna Pomaikai

2007 *Nā Kua‘āina: Living Hawaiian Culture*. University of Hawai‘i Press, Honolulu, Hawai‘i

McQuagge, Richard L.

1990 *Archaeological Report for Hāna , Maui, Hawaii TMK 1-4-13:14, 15*. Copies available from Richard L. McQuagge, Haiku, Hawaii.

Meares, John

1791 *Extracts from: Voyages Made in the Years 1788 and 1789 From China to the Northwest Coast of America, with an Introductory Narrative of a Voyage Performed in 1786, from Bengal, in the Ship "Nootka"*. Translated by Bruce Cartwright. Hawaiian Historical Society Reprints. Legographic Press, London.

Mifflin, Thomas

1983 *Schooner from Windward*. University of Hawaii Press, Honolulu, Hawaii.

MKE Associates LLC, and Inc. Fung Associates

2013 Hawaii State Historic Bridge Inventory and Evaluation, Hawaii.

Nagamine Okawa Engineers Inc., and Inc. Fung Associates

2015 *Hāna Highway, Route 360 Bridge Preservation Plan*, Honolulu, Hawai‘i.

Oceanit

2000 *Hāna Highway Rockfall Mitigation Plan*. Oceanit Laboratories, Inc., Honolulu, Hawai‘i.

Orr, Maria E., Hallett H. Hammatt, and Victoria S. Creed

1997 *An Archaeological Subsurface Testing at a Parcel Adjacent to the Hāna Cultural Center, Hāna , Maui (TMK 1-4-13:14 & 15)*. Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Perzinski, David, and Michael Dega

2011 An Archaeological Monitoring Report for the New Lahainaluna High School Cafeteria Lahaina, Panaewa Ahupua'a, Lahaina District Maui Island, Hawai'i [TMK (2) 4-6-018: 012 por.]. Scientific Consultant Services, Inc., Honolulu.

Pukui, Mary Kawena, and Samuel H. Elbert

1986 Hawaiian Dictionary Hawaiian-English English-Hawaiian. Revised and Enlarged ed. University of Hawai‘i Press, Honolulu.

Pukui, Mary Kawena, and Laura C. Green

1995 *Folktales of Hawai‘i*. Bishop Museum Press, Honolulu, Hawai‘i.

Richards, William, and Charles Samuel Stewart

1825 *The Missionary Herald*. The Proceedings At Large of the American Board of Foreign Missions with a General View of Other Benevolent Operations. Crocker and Brewster, Boston.

Rotunno-Hazuka, Lisa, Jenny O'Claray-Nu, and Jeffrey Pantaleo

2018 *Archaeological Inventory Survey for an Agriculturally Zoned Parcel Located in Kawaipapa Ahupua‘a, Hāna District, Island of Maui TMK: (2) 1-4-006:014 pors*. Copies available from LLC. Archaeological Services Hawaii, Pu‘unēnē, Hawai‘i.

Schmitt, Robert C.

1977 *Historical Statistics of Hawaii*. University Press of Hawaii, Honolulu.

Schoofs, Robert

1978 *Pioneers of the Faith. History of the Catholic Mission in Hawaii (1827-1940)*. Sturgis Printing Co, Honolulu.

Sinoto, Aki

1985 *Archaeological Reconnaissance-- Hāna Ranch, Proposed Garden Cottages, Hāna , Maui, Hawaii; TMK 1-4-03:3; 1-4-04:16, 17*. Copies available from Bishop Museum, Honolulu.

Smith, V.L., and W.R. Eadington

1992 *Tourism alternative: Potentials and problems in the development of tourism.* University of Pennsylvania Press, Philadelphia.

Speakman, Cummins E.

1978 *Mowee: An Informal History of the Hawaiian Island*. Peabody Museum of Salem, Salem, Massachusetts

Sterling, Elspeth P.

1998 *Sites of Maui*. Bishop Museum Press, Honolulu.

Stokes, John F.G.

1916 Maui Heiau, Department of Anthropology, Honolulu.

1917 Report on the Heiau of Maui. In *Hawaiian Alamanac and Annual for 1913 The Reference Book of Information and Statistics Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others.*, edited by Thomas G. Thrum, pp. 125. Thos. G. Thrum, Honolulu.

The Hawaiian Star.

1897 Hāna 's Future. *The Hawaiian Star* February 2, 1897:5. Honolulu, Hawaii.

1898 Big Prices. *The Hawaiian Star* December 19, 1898:4. Honolulu, Hawaii.

The Honolulu Advertiser.

1910 Through the Hāna District of Maui. *The Honolulu Advertiser* 4 September 1910:13. Honolulu, Hawaii.

1914 The "Ditch Country"--A Wonder Land--By Jack London. *The Honolulu Advertiser* Saturday, 28 November 1914. Honolulu, Hawaii.

The Pacific Commercial Advertiser.

1869 The Epidemic. *The Pacific Commercial Advertiser* October 2, 1869. Honolulu, Hawaii.

The Polynesian.

1853a *The Polynesian* November 19, 1853. Honolulu, Hawaii.

1853b For the Polynesian. *The Polynesian* December 24, 1853. Honolulu, Hawaii.

1854 *The Polynesian* January 21, 1854. Honolulu, Hawaii.

Thrum, Thomas G.

1909a Chapter of Firstling's. In *The Hawaiian Annual*, edited by Thomas G. Thrum, pp. 129. Thos. G. Thrum, Honolulu.

1909b Heiaus: Their Kinds, Construction, Ceremonies, Etc. In *The Hawaiian Almanac and Annual for 1910*, edited by Thomas G. Thrum, pp. 53-71. Thos. G. Thrum, Honolulu, Hawai‘i

U.S. Department of Agriculture, Natural Resources Conservation Service

2001 Soil Survey Geographic (SSURGO) database for Island of Lanai, Hawaii (hi970). U.S. Department of Agriculture, Natural Resources Conservation Service.

U.S. Geological Survey

1933 *Topographic Map, Maui Island*. United States Department of the Interior, USGS. Reston, Virginia.

1992 *Hāna Topographic Quadrangle*.

Ulukau

2021 The Hawaiian Electric Library. Sponsored by the University of Hawaii and online at.

Walker, Winslow

1931 *Archaeology of Maui*. Bernice Pauahi Bishop Museum, Honolulu.

Wilson Okamoto & Associates, Inc.

2001 Final Preservation Plan for County of Maui Bridges Within the Hāna Highway Historic District, County of Maui, Department of Public Works and Waste Management.

Yucha, Josephine M., Jay Rapoza, and Hallett Hammatt

2022 *Archeological Literature Review and Field Inspection for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupua‘a, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way* Submitted to Cultural Surveys Hawai'i, Inc., Wailuku, Hawai'i.

Yucha, Trevor M., and Hallett H. Hammatt

2017 *Archaeological Inventory Survey Report for the Hāna Highway Rockfall Mitigation Mile Post 12 Project, Honomanū Ahupua‘a, Hāna District, Maui Island, TMKs: [2] 1-1-001:021 por., 044 por., and [2] 1-1-001 (Hāna Highway Right-of-Way)*. Cultural Surveys Hawai‘i, Inc., Wailuku, Hawai‘i.

# Appendix A SHPD Correspondence

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HAWAII

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CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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CONSERVATION AND COASTAL LANDS
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**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

June 22, 2020

IN REPLY REFER TO:
Log No.: 2020.00706
Doc. No.: 2006LS31
Archaeology

Mr. Glen Ueno, Administrator
County of Maui
Department of Public Works
Development Services Administration Division
250 South High Street
Wailuku, Hawaii 96793

Dear Mr. Ueno:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –**
**Grading Permit Application – G T2020-0059**
**Work to Perform Application – WTP T2020-0010**
**5101 Uakea Rd., Hana – Test borings**
**Owner: Jerry and Suzanna Hupp**
**Kawaipapa Ahupua‘a, Hāna District, Island of Maui**
**TMK: (2) 1-4-004:021 por. and 029 por.**

This letter provides the State Historic Preservation Division's (SHPD's) review of this subject permit application for the proposed drilling of two 4-inch diameter test borings to 5-10 feet deep in Uakea Road to determine soil characteristics fronting 5101 Uakea Road. Pending the results, the owners propose to design and install a new septic system for the Helene Hall building in the future. The SHPD received this permit application on March 27, 2020 which included an HRS 6E Submittal Form, a Work on County Roadway Permit Application, and a Grading Permit Application. The parcel totals 12.991 acres. The grading permit indicates proposed excavation of 0.13 cubic yards, maximum depth of excavation is 10 feet, and that a portion of the property is located within the SMA.

A search of our records indicates an archaeological survey has not been conducted on the subject parcel. The USDA (Foote et al. 1972) identifies the soils as Hana silty clay loam, moderately deep variant, 3 – 15% slopes (HKNC). The Hana Ball Park which is near the project area does contain one known historic property, an in-situ burial (Site 50-50-13-5190). Site 5190 was documented near the boundary between TMK: (2) 1-4-004:021 and the TMK: (2) 1-4-004:029. SHPD accepted the archaeological monitoring plan (AMP) prepared for the Hana Ball Park Restroom Septic System Improvements project (Fredericksen 2015) in a letter dated May 14, 2015 (Log No. 2015.01238, Doc. No. 1505MD22).

At this time, SHPD has insufficient information to determine the potential for the proposed test borings to adversely impact subsurface historic properties. Therefore, **SHPD requests archaeological monitoring** for identification purposes to adequately identify any archaeological historic properties that may be present and, if encountered, to adequately document them, determine potential impacts to them, and ensure that appropriate mitigation is implemented. See http://dlnr.hawaii.gov/shpd/about/ branches/archaeology/ for a listed of permitted archaeological firms.

**SHPD also requests** the archaeological monitoring be conducted under the guidance of the Fredericksen (2015) AMP.

Mr. Glen Ueno
June 22, 2020
Page 2

Lastly, **SHPD requests the County flag this property for SHPD review** to determine if an archaeological inventory survey (AIS) is needed, should the owners propose a future ground disturbing project, such as installation of a new septic system, due to the potential for ground disturbing projects to impact cultural deposits or burials. This letter provides a review of the proposed test borings only.

**SHPD hereby notifies the County** that the Fredericksen (2015) AMP shall be implemented during excavation of the test borings and that the permit issuance process for these borings may continue.

**SHPD requests** written notification at the start of archaeological monitoring. Within 30 days of completion of archaeological monitoring fieldwork, SHPD looks forward to receiving for review and acceptance a brief archaeological monitoring letter report of findings as specified in HAR §13-282-3(f)(1). Subsequently, SHPD looks forward to receipt of an archaeological monitoring report meeting the requirements of HAR §13-279-5 for review and acceptance.

Please contact Susan Lebo, Archaeology Branch Chief, at Susan.A.Lebo@hawaii.gov or at (808) 692-8019 for matters regarding archaeological resources or this letter.

Aloha,
Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: Building Permits, Building.Permits@co.maui.hi.us
Patricia Arabit, patricia@hirata-hawaii.com
Darlyn Atay, Darlyn.Atay@co.maui.hi.us

DAVID Y. IGE
GOVERNOR OF
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July 12, 2021

Rowena Dagdag-Andaya, Director
County of Maui
Department of Public Works (DPW)
200 S. High Street
Kalana O Maui Bldg. 4th Fl
Wailuku, HI 96793
c/o juan.rivera@co.maui.hi.us

IN REPLY REFER TO:
Project No.: 2021PR00639
Submission No.: 2021PR00639.001
Doc. No.: 2107AM07
Archaeology

Dear Rowena Dagdag-Andaya:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –**
**County of Maui Permit Application WTP T2021/0025**
**County of Maui Environmental Management Wastewater Reclamation Division**
**Helene Hall Septic System Improvements Project (Job No. WW 19-15)**
**Kawaipapa Ahupua‘a, Hāna District, Island of Maui**
**TMK: (2) 1-4-004:029 por. and 034 por. (Keawa Place and Uakea Road ROWs)**

This letter provides the State Historic Preservation Division's (SHPD's) review of the County of Maui Environmental Management Wastewater Reclamation Division's (WWRD) Helene Hall Septic System Improvements Project (Job No. WW 19-15) and associated County of Maui Permit Application WTP T2021/0025. SHPD received the submission on June 8, 2021, which included the construction designs, a grading and grubbing permit application, a cover letter from the County of Maui requesting our review of the subject permit application, and a cover letter from Kennedy Jenks Consultants, Inc.

WWRD proposes the Helene Hall Septic System Improvements Project within a 0.39-acre area on the subject property. The project will include upgrades to the existing aerobic treatment units (ATU). One existing ATU will be rehabilitated with a new aeration blower and the other ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed, and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place and Uakea Road. The force main will be buried within the existing roadway and the existing cesspools will be abandoned and closed.

A search of our records indicates an archaeological inventory survey (AIS) has not been conducted on the property, however SIHP # 50-50-13-05190 (burial) was inadvertently discovered during unmonitored excavation work in December 2001. Subsequently, SHPD reviewed an archaeological monitoring report (AMR; Fredericksen and Fredericksen 2002) for the completion of the project in a letter dated May 15, 2002 (Log No. 29871, Doc. No. 0204MK24). The AMR indicates human remains were partially impacted during excavation for footings for a lighting project at the north end of the park and the remains have been preserved in place. The burial pit was identified in Layer IB (silty clay loam) and intrusive into Layer II (silty clay). Fredericksen and Fredericksen (2002) recovered three indigenous artifacts from Layer IA, (fill/re-deposited soil layer), consisting of a hammerstone, a hammerstone/chopper, and a pecking stone. Historic artifacts included a 1940 US penny, an Indian Head US nickel, the sherds of a small bowl, and a screw top liquor bottle. The AMR indicates no intact cultural layer was identified during archaeological monitoring and suggests that the cultural layer may have been disturbed during the initial development of the park. Subsequently, SHPD reviewed and accepted an archaeological monitoring plan (AMP;

Rowena Dagdag-Andaya
07/12/2021
Page 2

Fredericksen, March 2015) for the Hāna Ball Park Septic System Project in a letter dated May 14, 2015 (Log No. 2015, Doc. No. 1505MD22) and an AMP (Stankov and Dega, March 2021) for the Hāna Community Center Building F Parking Improvements Project (Job No. P19/025) in a letter dated May 14, 2021 (Submission No. 2020PR34284.003, Doc. No. 2105AM12). SHPD received a draft archaeological monitoring report (Log No. 2016.01844) on July 29, 2016; it has not been reviewed and accepted.

At this time, SHPD has insufficient information to make a determination regarding the potential for the subject project to impact historic properties. **SHPD requests an archaeological inventory survey (AIS)** with a subsurface testing component be conducted and that an AIS report meeting the requirements of HAR §13-276-5 be submitted to SHPD for review and acceptance prior to initiation of project related work.

The AIS shall be conducted by a qualified archaeologist in order to adequately identify and document any archaeological historic properties that may be present, to assess their significance, to determine the potential impacts of this project on any identified archaeological historic properties, and to identify and ensure appropriate mitigation is implemented, if needed.

**SHPD requests** the project proponent and archaeological firm consult with our office regarding an appropriate testing strategy prior to initiation of the AIS.

**SHPD shall notify the County** when the archaeological inventory survey report and any required mitigation plans are accepted, and the permit issuance process may proceed.

When completed, please submit the draft AIS report to our office via HICRIS to Project 2021PR00639 using the Project Supplement option.

Please contact Andrew McCallister, Maui Archaeologist IV, at andrew.mccallister@hawaii.gov for matters regarding archaeological resources in this letter.

Aloha,
*Alan Downer*

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: County of Maui, dsa.engineering@mauicounty.gov
Kari Tarnstrom, Kennedy Jenks Consultants, Inc., karitarnstrom@kennedyjenks.com
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**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

January 24, 2023

IN REPLY REFER TO:
Project No. 2021PR00639
Doc. No. 2301AM10
Archaeology

Jordan Molina, Director
County of Maui
Department of Public Works
200 S. High Street
Kalana O Maui Bldg. 4th Fl
Wailuku, HI 9679
c/o Lance Nakamura
Email: lance.nakamura@co.maui.hi.us

Dear Jordan Molina:

SUBJECT: **Chapter 6E-8 and 6E-42 Historic Preservation Review –**
**County of Maui Permit Application WTP T2021/0025**
**County of Maui Environmental Management Wastewater Reclamation Division**
**Helene Hall Septic System Improvements Project (Job No. WW 19-15)**
**Archaeological Literature Review and Field Inspection Report**
**Kawaipapa Ahupua'a, Hāna District, Island of Maui**
**TMK: (2) 1-4-004:029 por. and 034 por. (Keawa Place and Uakea Road ROWs)**

This letter provides the State Historic Preservation Division's (SHPD's) review of the County of Maui Environmental Management Wastewater Reclamation Division's (WWRD) Helene Hall Septic System Improvements Project (Job No. WW 19-15) and associated County of Maui Permit Application WTP T2021/0025. SHPD previously reviewed the project and requested an archaeological inventory survey (AIS; Project No. 2021PR00639, Doc. No. 2107AM07). Subsequently, SHPD received an archaeological literature review and field inspection (LRFI) report titled *Archaeological Literature Review and Field Inspection for the Helene Hall Septic System Improvements Project, Kawaipapa Ahupua'a, Hāna District, Maui Island, TMKs: [2] 1-4-004:029 por. and 034 por., Keawa Place and Uakea Road Rights-of-Way* (Yucha et al., August 2022).

The County of Maui proposes the Helene Hall Septic System Improvements Project within a 0.39-acre area on the subject property. The project will include upgrades to the existing aerobic treatment units (ATU). One existing ATU will be rehabilitated with a new aeration blower and the other ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed, and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place and Uakea Road. The force main will be buried within the existing roadway and the existing cesspools will be abandoned and closed.

Cultural Surveys Hawai'i, Inc. (CSH) produced the subject LRFI report in support of the Helene Hall Septic System Improvements Project. Yucha et al. (August 2022) includes summaries of historic land use and previous archaeological investigation in the area. Additionally, CSH preformed a pedestrian survey of the project area which included the use of ground penetrating radar (GPR) within portions of the project area. Additionally, the report includes the results of the geological testing performed in the planning phase of the project. No historic properties were identified within the project area during the field inspection. However, Yucha et al. (August 2022) indicates several historic retaining walls occur along portions of Uakea Road and Keawa Place, outside of the current project area. Additionally, the GPR

Jordan Molina
01/24/2023
Page 2

survey identified one anomaly that is interpreted as a buried utility line. The geotechnical boring indicates there is variation of soils within the project area including alluvial loams, silts, and clays, basalt bedrock, and marine sand deposits.

Based on the results of the information provided in the LRFI, the County of Maui requests that the project proceed with archaeological monitoring for identification purposes.

At this time, SHPD has insufficient information to determine the potential for the project to adversely impact significant subsurface historic properties within the project area including the County of Maui ROWs. Therefore, **SHPD concurs** with County of Maui's request that the project proceed with archaeological monitoring for identification purposes in order to adequately identify if any archaeological historic properties are present and, if so, to determine potential impacts to them and, if necessary, to ensure that appropriate mitigation is implemented.

SHPD looks forward to receiving an archaeological monitoring plan (AMP) meeting the requirements of HAR §13-279-4 for SHPD's review and acceptance prior to the project initiation.

**SHPD will notify the County of Maui** when the AMP is accepted and the project permitting process may continue.

Please submit the AMP and associated submittal review fee, along with a copy of this letter, to HICRIS Project 2021PR00639 using the Project Supplement option.

Please contact Andrew McCallister, Maui Archaeologist IV, at andrew.mccallister@hawaii.gov for any matters regarding archaeological resources or this Letter.

Aloha,
*Alan Downer*

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: County of Maui, dsa.engineering@mauicounty.gov
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# CULTURAL IMPACT ASSESSMENT

## APPENDIX

# D

# FINAL
# Cultural Impact Assessment for the Helene Hall Septic System Improvement Project, Kawaipapa Ahupuaʻa, Hāna District Maui Island, TMK: [2] 1-4-004:001, 029, 034, 999

**Prepared for**

**Munekiyo Hiraga**

**on behalf of the County of Maui**


**Prepared by**

**Chantellee Konohia Spencer, B.A.**

**and**

**Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawaiʻi, Inc.**

**Kailua, Hawaiʻi**


**(Job Code: KAWAIPAPA 4)**

**May 2022**


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**Fax: (808) 244-1994**

# Management Summary

| | |
|---|---|
| **Reference** | Cultural Impact Assessment for the Helene Hall Septic System Improvement Project, Kawaipapa Ahupua‘a, Hāna District, Maui Island, TMK: [2] 1-4-004:001, 029, 034, 999 (Spencer and Hammatt 2022) |
| **Date** | May 2022 |
| **Project Number(s)** | Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: KAWAIPAPA 4 |
| **Agencies** | County of Maui Department of Parks and Recreation,<br>Department of Environmental Management Wastewater Reclamation Division |
| **Land Jurisdiction** | County of Maui |
| **Project Location** | The project area comprises TMK: [2] 1-4-004:001, 029, 034, 999 in the Kawaipapa Ahupua‘a. The project area is depicted on a portion of the 1992 Hana U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle. |
| **Project Description** | The County of Maui (County), Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall, in Hāna, Maui. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This condition causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the County Wastewater Reclamation Division (WWRD) is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.<br><br>One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed as a wastewater pump stations. The wastewater will be pumped uphill along the roadway from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 ft long and aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be 1.5 inches (in.) in diameter and buried within the existing roadway before reaching the Hāna Ball Park parking lot and the new treatment system and absorption field. The existing cesspools will be abandoned and closed.<br>The improvements are anticipated to improve system operability, reliability, and treated water quality. The proposed treatment train |

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| | provides aerobic pretreatment, which will provide better BOD5 removal and reduce the size of the new treatment unit at the ball park. This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:<br>1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups.<br>2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs.<br>3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ball Park parking lot.<br>4. Construct an offsite traffic rated absorption field at Hāna Ball Park parking lot for effluent disposal. |
| **Project Acreage** | The project area is approximately 0.8 acres. |
| **Document Purpose and Regulatory Context** | This cultural impact assessment (CIA) supports compliance for the:<br>• The mandate set forth by the Hawai‘i State Constitution (Articles IX and XII), courts, Hawai‘i Regulatory Statutes (HRS), and Hawai‘i Administrative Rules (HAR) and other Hawai‘i State laws requiring government agencies to promote and preserve cultural beliefs, practices. and resources of native Hawaiians and other ethnic groups;<br>• the State of Hawai‘i’s environmental review process under HRS §343, which requires consideration of the proposed project’s potential effects on cultural practices and cultural features in order to “promote responsible decision making” (HRS §343);<br>• and, the State of Hawai‘i’s historic preservation review process under HAR §13-275-6 and §13-284-6, which requires the identification and mitigation of adverse effects proposed by a potential project in order to “promote the use and conservation of historic properties for the education of the citizens of Hawai‘i” (HAR §13-275-6)<br>This CIA contains information gathered from archival research and consultation, compiled in order to “analyze the impact of a proposed action on cultural practices and features associated with the project area” (Office of Environmental Quality Control 1997). Cultural practices and cultural features may include traditional cultural properties (TCPs), designated significant historic properties under State of Hawai‘i significance Criterion e, pursuant to Hawai‘i Administrative Rules (HAR) §13-275-6 and §13-284-6. Significance Criterion e refers to historic properties that “have an important value to the native Hawaiian |

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| | people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity" (HAR §13-275-6 and §13-284-6). |
| **Results of Background Research** | Background research for this study yielded the following results, presented in approximate chronological order:<br>1. The division of Maui's lands into political districts first occurred during the rule of Kaka‘alaneo under the direction of his *kahuna* (priest) named Kalaiha‘ōhi‘a (Beckwith 1970:383).<br>2. Chief Pi‘ilani united all of Maui under his rule during the sixteenth or seventeenth century. Pi‘ilani's sons, Lonopi‘ilani and Kiha-a-Pi‘ilani, fought for control of Maui.<br>3. Maui chiefs ruled Hāna until its conquest in the mid–18th century by Hawai‘i Island's Chief Kalani‘ōpu‘u (Kamakau 1992:85−87). Decades of war between the island polities ensued, with Maui Chief Kahekili resuming rule of Hāna and all Maui until their conquest and incorporation into the united kingdom of Hawai‘i by Kamehameha in 1790 (Ulukau 2021a)<br>4. During the last half of the 18th century the battles between Maui and Hawai‘i were carried on by the high chiefs Kahekili of Maui and Kalani‘ōpu‘u of Hawai‘i. Kalani‘ōpu‘u was in control of the Hāna and Kipahulu areas from ca. 1759 to 1765 when Kahekili won out. However, the Hawai‘i forces were able to regain control from ca. 1775 to 1783 (Kamakau 1992:83-84).<br>5. With the death of Kalani‘ōpu‘u in 1782, Kahekili regained control of Hāna, which he retained, though not without further battles with Hawai‘i Island forces (i.e. Kamehameha), until his death in 1794 (Kamakau 1992:88-91)<br>6. With the death of Kahekili and the assistance of newly acquired foreign power (canons, muskets, men) Kamehameha gained control not only of Maui, but of all the Hawaiian Islands, except Kaua‘i, by 1795 (Kamaukau 1992:171).<br>7. Hāna is also associated with the *ali‘i nui* (supreme elite) Ke‘eaumoku Papaiaheahe and his *‘ohana*. His daughter, born at Pu‘u Ka‘uiki in the late 18th century, became Queen Ka‘ahumanu, wife of Kamehameha I (Kapiikauinamoku in *The Honolulu Advertiser*).<br>8. The ambition for successful commercial cultivation in East Maui continued to be the focus of all endeavors throughout the |

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| | mid- and late-1800s. Sugar, coffee, and rubber plantations were started throughout the region with high hopes of success.<br>9. Hāna was one of the earliest locales to become involved in commercial cane operations in “1849 or 1850, when a Mr. Lindgren cultivated 60 acres of cane and ground it with a mill erected in a grass shack” (Condé and Best 1973:247).<br>10. During this early period of commercialization, small farmers apparently raised cane crops within LCAs and grants, and then sold the cane to the mills. By the end of the century, Hana Plantation had taken over large tracts of land and smaller farmers disappeared, as did most of the remains associated with this era (Condé and Best 1973:247–250).<br>11. The paving of the Hāna Highway in 1962 increased tourist visitation in the project area vicinity. Afterwards, infrastructure and development projects in the 1970s through the present shaped the current landscape (Smith and Eadington 1992:128).<br>12. The Hāna Highway Historic District, which extends from Hoalua Bridge near Huelo in the Makawao District to Koukouai Bridge in the Kīpahulu District, includes 78 contributing feature components dating to over 50 years old. The Hāna Highway was also recognized as a Millennium Legacy Trail in 2000, and in 2001 was nominated to the National Register of Historic Places (NRHP). |
| **Results of Community Consultation** | CSH reached out to 45 NHOs, agencies, and community members. Six people/agencies responded to the consultation letter, one of them provided written testimony. CSH initiated its outreach effort in April 2021through April 2022. Below is the name of the agency who provided written testimony:<br>1. Department of Land and Natural Resources, Commisison on Water Resource Management |
| **Identification of Cultural Practices** | With little response from the community, through background research CSH identified the following cultural, historical, and natural resources where cultural practices (including traditional and customary native Hawaiian rights) are being exercised in Kawaipapa Ahupua‘a:<br>1. Fishing<br>2. Ceremonial and Religious practices |
| **Identification of Impacts to Cultural Practices** | Community consultation did not provide usable results. CSH has determined that due to the long-time standing of the Helene Hall in Hāna, the project does not pose any signficant impact to ongoing and future cultural practices. |

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| **Mitigation Possibilities Identified During Background Research and Consultation** | Due to the few responses from community consultation, CSH makes the following mitigation recommendations that may aid in promoting and preserving cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups:<br>1. Project construction workers and all other personnel involved in the construction and related activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that *iwi kūpuna* (ancestral remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43, is recommended.<br>2. In the event that *iwi kūpuna* and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance. |

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# Section 1 Introduction

## 1.1 Project Description

At the request of Munekiyo Hiraga and on behalf of The County of Maui, Department of Parks and Recreation, CSH is conducting a cultural impact assessment (CIA) for the Helene Hall Septic System Improvements Project in Hāna, Maui. The location and boundaries of the proposed project are delineated on a portion of the 1992 Hāna USGS topographic quadrangle (Figure 1), a tax map plat (Figure 2), and a 2015 aerial photograph (Figure 3). The County of Maui (County), Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have the capacity to discharge the daily flows. This causes the wastewater to back-up into the ATU system and requires staff to pump out the ATUs and cesspools with pumper trucks at least once a week. Due to these treatment and disposal deficiencies, the County, Wastewater Reclamation Division (WWRD), is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.

One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed into a wastewater pump station. The wastewater will then be pumped uphill along the roadway from Helene Hall to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and aligned along Keawa Place (a State road) and Uakea Road (a County road). The force main will be 1-1/2” in diameter and buried within the existing roadway before reaching the Hāna Ball Park parking lot and the new treatment system and absorption field. The existing cesspools will be abandoned and closed.

The improvements are anticipated to improve system operability, reliability, and the quality of treated water. The proposed treatment train provides aerobic pretreatment, which will provide better $BOD_5$ removal and reduce the size of the new treatment unit at the ball park.

This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups
2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs
3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ball Park parking lot
4. Construct an offsite traffic rated absoprtion field at Hāna Ball Park parking lot for effluent disposal

Figure 1. Portion of the 1992 Hana USGS 7.5-minute topographic quadrangles showing the location of the study area

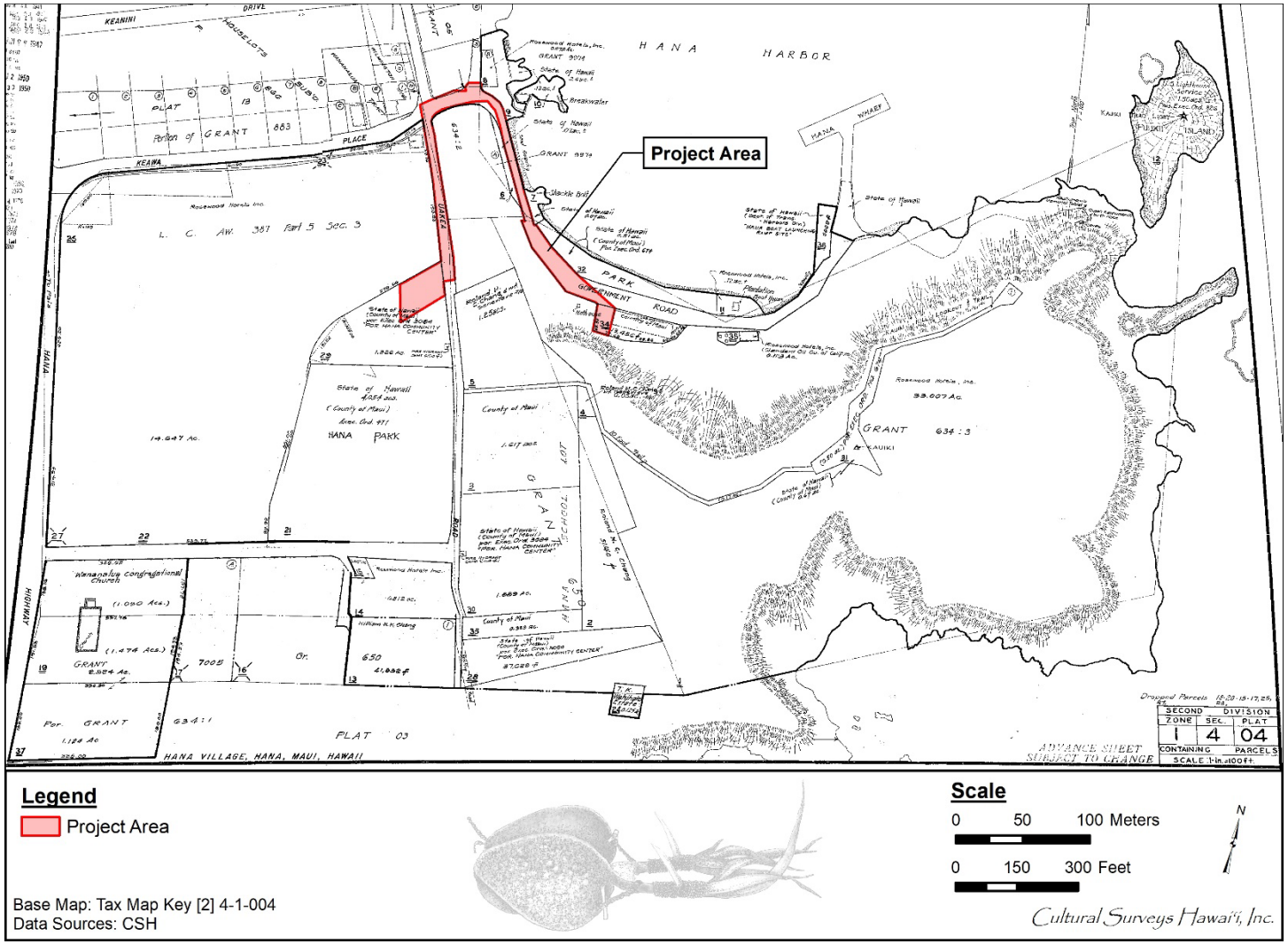


Figure 2. Tax Map Key (TMK) [2] 4-1-004 showing the study area (Hawaii TMK Service 2014)

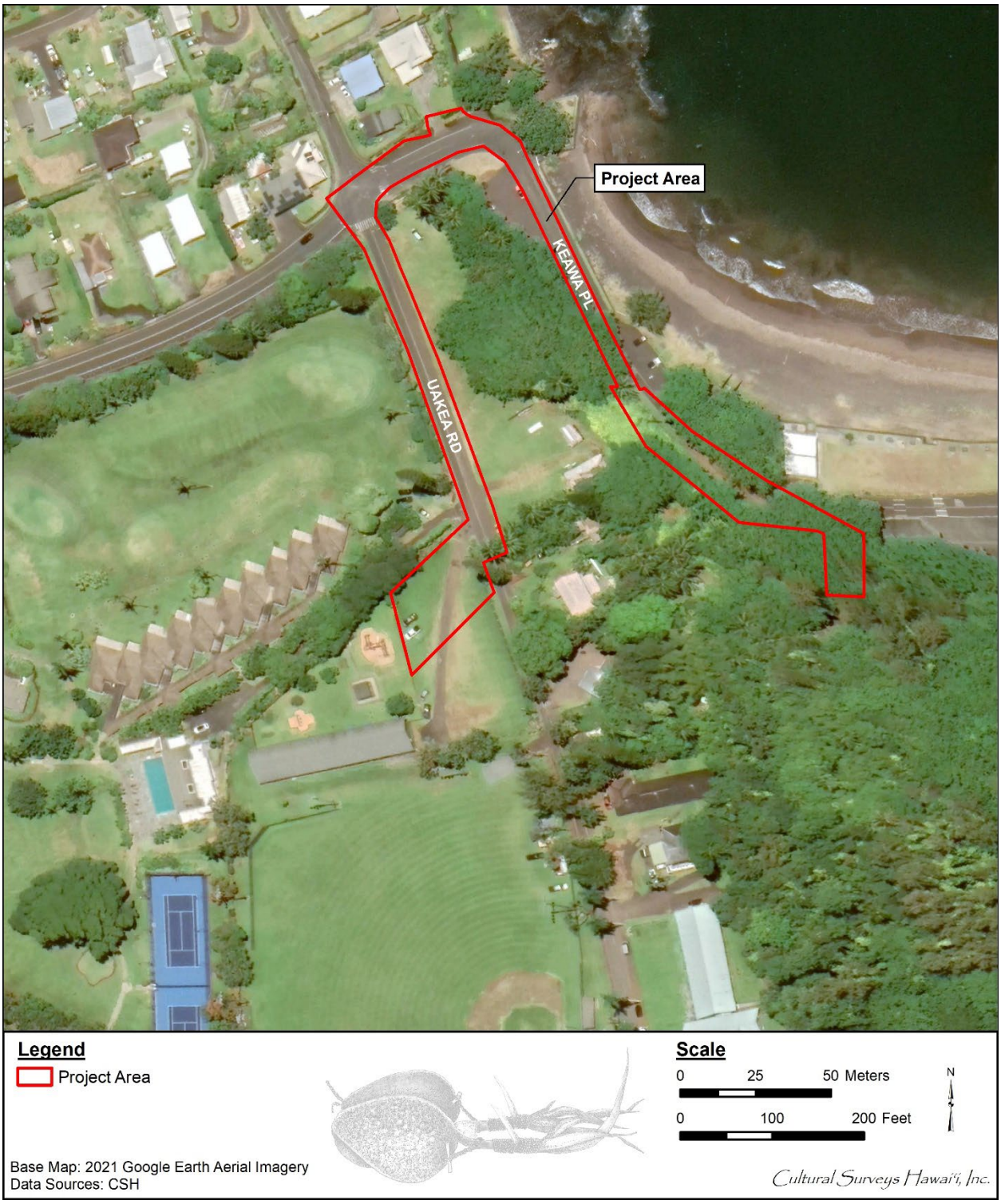


Figure 3. Aerial photograph showing the location of the study area (Google Earth 2015)

## 1.2 Document Purpose

This CIA was prepared to comply with the State of Hawai‘i’s environmental review process under Hawai‘i Revised Statutes (HRS) §343, which requires consideration of the proposed project’s potential effect on cultural beliefs, practices, and resources. Through document research, this report provides information compiled to date pertinent to the assessment of the proposed project’s potential impacts to cultural beliefs, practices, and resources (pursuant to the Office of Environmental Quality Control’s *Guidelines for Assessing Cultural Impacts*) which may include traditional cultural properties (TCPs). These TCPs may be significant historic properties under State of Hawai‘i significance Criterion e, pursuant to Hawai‘i Administrative Rules (HAR) §13-275-6 and §13-284-6. Significance Criterion e refers to historic properties that “have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity” (HAR §13-275-6 and §13-284-6). The document will likely also support the project’s historic preservation review under HRS §6E and HAR §13-275 and §13-284. The document is also intended to support the project’s environmental review and the discretionary land use permitting process including a State Special Use Permit (SUP) from the Land Use Commission (LUC).

## 1.3 Scope of Work

The scope of work for this CIA includes the following:

1. Examination of cultural and historical resources, including Land Commission documents, historic maps, and previous research reports with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal, and other resources or agricultural pursuits as may be indicated in the historic record.
2. Review of previous archaeological work at and near the subject parcel that may be relevant to reconstructions of traditional land use activities; and to the identification and description of cultural resources, practices, and beliefs associated with the parcel.
3. Consultation and interviews with knowledgeable parties regarding cultural and natural resources and practices in or near the parcel; present and past uses of the parcel; and/or other practices, uses, or traditions associated with the parcel and environs.
4. Preparation of a report that summarizes the results of these research activities and provides recommendations based on findings.

## 1.4 Natural Environment

### 1.4.1 *Ka Lepo* (Soils)

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972) (Figure 4). The project area consists entirely of Hana silty clay loam, moderately deep variant, 3 to 15 percent slopes (HKNC).

Soils of this series is described as follows:

> This series consists of well-drained soils on uplands on the island of Maui. These soils developed in volcanic ash. They are gently sloping to moderately steep.

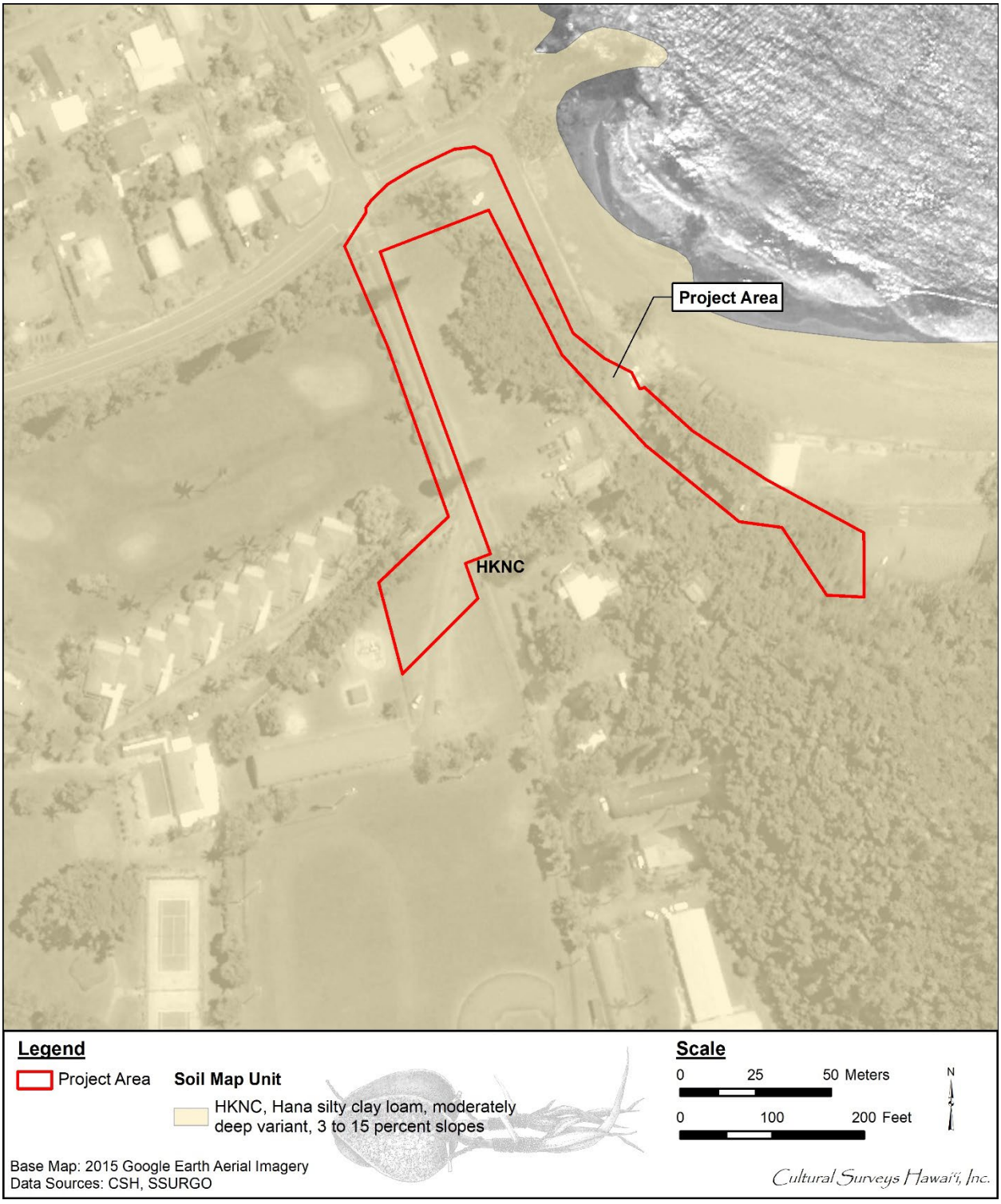


Figure 4. Overlay of Soil Survey of the State of Hawaii (Foote et al. 1972), indicating soil types within the project area (U.S. Department of Agriculture Soils Survey Geographic Database [SSURGO] 2001)

> Elevations range from nearly sea level to 1,200 feet. The annual rainfall amounts to 80 to 150 inches. It is well distributed throughout the year. The mean annual soil temperature is 73° F. Hana soils are geographically associated with Honomanu and Malama soils. [...]
>
> These soils are used for pasture and homesites. The natural vegetation consists of californiagrass, guava, kaimiclover, koa, and sodges. [...]
>
> This soil is nonstony and moderately deep. Its surface layer is dark-brown silty clay loam that contains 10 to 15 percent gravel and cobblestones. The subsoil, 6 to 14 inches thick, is reddish-brown, very friable silty clay loam that has weak, subangular blocky structure. It contains 20 to 30 percent gravel and cobblestones. The substratum is fragmental Aa lava at the depth of 20 to 30 inches.
>
> Run off is slow to medium and the erosion hazard is slight to moderate. In places roots penetrates to a depth of 2 to 3 feet. Included in mapping were small, moderately steep and steep areas near cinder cones. Also included were a few rock outcrops.
>
> This soil is used for pasture and homesites (Capability classification IIIe, nonirrigated; pasture group 11; wood-land group 8). [Foote et al. 1972:37]

### 1.4.2 *Ka Makani* (Winds)

For Native Hawaiians, *makani* (wind) were named for various reasions. Names of winds were assigned based on but not limited to their direction, strength, and geographic location. David Malo, a Native Hawaiian historian, explains some general terms related to wind:

> […] There was the *kona*, a wind from the south, of great violence and of wide extent. It affected all sides of an island, east, west, north, and south, and continued for many days […] The *kona* wind often brings rain, though sometimes it is rainless. […] The *hoolua*, a wind that blows from the north, sometimes brings rain and sometimes is rainless […] The *hau* is a wind from the mountains, and they are thought to be the cause of it, because this wind invariably blows from the mountains outwards towards the circumference of the island. [Malo 1951:14]

Malo has supplied a foundation of names for winds, however, there is an abundance of names in various stories and chants. In the traditional story *The Wind Gourd of La‘amaomao*, Pāka‘a and his son Kūapāka‘a are descendants of the wind goddess La‘amaomao whose traditional home was in a gourd that contained all of the winds of Hawai‘i. La‘amaomao controlled and called forth the winds by chanting their names. The following excerpt briefly names the winds of Hāna:

| | |
|---|---|
| *He makani ko Hana he ai maunu,*<br>*He kaomi, he kapae,*<br>*He hoolua, he lauawaawa,*<br>*He paiolopaowa, he halemanu,*<br>*He kiu, he kona,* […] | Hāna’s winds are ‘Ai-maunu, Kaomi, Kāpae, Ho‘olua, Lauawaawa, Paiolopaowa, Halemauu, Kui, Kona […]<br><br>[Nakuina 1909:68;1990:63] |

### 1.4.3 *Ka Ua* (Rains)

Precipitation is a major component of the water cycle and is responsible for depositing *wai* (fresh water) on local flora. Pre-Contact *kānaka* (Native Hawaiians) recognized two distinct annual seasons. The first, known as *kau* (period of time, especially summer) lasts typically from May to October and is a season marked by a high-sun period corresponding to warmer temperatures and steady trade winds. The second season, *ho‘oilo* (winter, rainy season) continues through the end of the year from November to April and is a much cooler period when trade winds are less frequent, and widespread storms and rainfall become more common (Giambelluca et al. 1986:17).Each small geographic area on O‘ahu had a Hawaiian name for its own rains. According to Akana and Gonzalez (2015),

> Our kupuna had an intimate relationship with the elements. They were keen observers of their environment, with all of its life-giving and life-taking forces. They had a nuanced understanding of the rains of their home. They knew that one place could have several different rains, and that each rain was distinguishable from another. They knew when a particular rain would fall, its color, duration, intensity, the path it would take, the sound it made on the trees, the scent it carried, and the effect it had on people. [Akana and Gonzalez 2015:XV]

The following sections presents the rains associated with the broader *moku* of Hāna taken from newspapers, *mo‘olelo,* and other historical documents.

#### 1.4.3.1 *Ka Ua ‘Āpuakea*

This particular rain is associated with Hāna. The following verse is from the story of Lauka‘ie‘ie and describes a sweet fragrance.

| | |
|---|---|
| *Puīa i ke ‘ala ka uka o Wākiu* | The upland of Wākiu is permeated with fragrance |
| *Ka nae ‘a‘ala o Kahalaowaka* | The sweet scent of Kahalaowaka |
| *Paoa i ke ‘ala ka ua ‘Āpuakea o Hāna* | The ‘Āpuakea rain of Hāna is soaked with perfume |
| | [Akana and Gonzalez 2015:5] |

The following section was featured in the history of the Kamehameha dynasty written by Samuel Kamakau.

> He ‘āina kaulana ‘o Hāna i ka wā kahiko . . . aloha nō nā ali‘i i kēia ‘āina ‘olu‘olu i ho‘opulu ‘ia e ka ua ‘Āpuakea, ka ua wāwahi i luna o ka hala, ka hala mai Wākiu a Honokalani.
>
> Hāna was a famous land in the olden times . . . the chiefs really loved this pleasant land dampened by the ‘Āpuakea rain, the rain that shatters upon the hala trees from Wākiu to Honokalani. [Akana and Gonzalez 2015:5]

The following verse was taken from a *mele kanikau* (lament) written for Pe‘aope‘a, son of Maui ruler Kamehamehanui‘ailū‘au (Akana and Gonzalez 2015:6).

| | |
|---|---|
| *Ka wai hālana ki‘o wai a ka ua* | The overflowing pool of rainwater |
| *I ho‘oki‘o ‘ia e ka ua ‘Āpuakea* | Gathered up by the ‘Āpuakea rain |
| *E ka makani Koholālele nei* | O Koholālele wind |
| *‘O ‘oe anei kahi ‘ano‘ai?* | Are you a friend? |
| *Ka ua wāwahi i luna o ka hala* | The rain shatters upon the hala trees |
| *Ka hala mai Wākiu a Honokalani* | The hala from Wākiu to Honokalani |
| | [Akana and Gonzalez 2015 5-6] |

1.4.3.2 *Ka Ua ‘Elemalino*

The following verse is taken from the *mele*, Lei Hāna I Ka Makani Ualau‘awa, this portion mentions the rain ‘Elemalino.

| | |
|---|---|
| *Ka lau likoliko ‘ōhi‘a o Hīna‘i* | The glistening ‘ōhi‘a leaf buds of Hīna‘i |
| *Ke oho pālālā lena uli o ke kī* | The broad, dark gold leaf of the ti plant |
| *I hoa ‘ia e ka ua ‘Elemalina ē, i laila* | Held fast by the ‘Elemalino rain, there |
| | [Akana and Gonzalez 2015:23] |

Below is the portion of a mele taken from the Epic Tale of Hi‘iakaikapoliopele (Hooulumahiehie 2006b) mentioning the ‘Elemalino rain.

| | |
|---|---|
| *Niniu Ka‘uiki, ke po‘o lanakila* | Ka‘uiki, triumphant summit, reels |
| *Hāliuliu I ka ua ‘Elemalino ē* | Leaning into the ‘Elemalino rain |
| | [Akana and Gonzalez 2015:23] |

1.4.3.3 *Ka Ua Kea*

Ka Ua Kea is a general rain term for the Hāna District and is known to be felt throughout the various ahupua‘a of Hāna. One in particular is in Ka‘uiki, which is located makai of Kawaipapa, nestling right next to Hāna Bay.

| | |
|---|---|
| *‘A‘ohe nō a he mea like me ka ua Ke*a | There is nothing to compare with the white [Kea] rain |
| *‘Oni a lele Ka‘uiki i ka mālie* | As Ka‘uiki appears to be leaping in the calm |
| | [Akana and Gonzalez 2015:72] |

1.4.3.4 *Ka Ua Kualau*

Taken from a kanilau for J. Henry, the Kualau rain is mentioned that it is an ocean rain.

| | |
|---|---|
| *Ku‘u kānea mai ka makani Lau‘awa* | My beloved husband from the |

| | |
|---|---|
| *o Hāna* | Lau‘awa wind of Hāna |
| *Mai ka ua kualau i ka moana* | from the kualau rain over the ocean. |
| | [Akana and Gonzalez 2015:122] |

# Section 2 Methods

## 2.1 Archival Research

Research centers on Hawaiian activities including *ka‘ao* (legends), *wahi pana* (storied places), *‘ōlelo no‘eau* (proverbs), *oli*, *mele* (songs), traditional *mo‘olelo*, traditional subsistence and gathering methods, ritual and ceremonial practices, and more. Background research focuses on land transformation, development, and population changes beginning with the early post-Contact era to the present day.

Cultural documents, primary and secondary cultural and historical sources, historic maps, and photographs were reviewed for information pertaining to the study area. Research was primarily conducted at the CSH library. Other archives and libraries including the Hawai‘i State Archives, the Bishop Museum Archives, the University of Hawai‘i at Mānoa’s Hamilton Library, Ulukau, The Hawaiian Electronic Library (Ulukau 2014), the State Historic Preservation Division (SHPD) Library, the State of Hawai‘i Land Survey Division, the Hawaiian Historical Society, and the Hawaiian Mission Houses Historic Site and Archives are also repositories where CSH cultural researchers gather information. Information on Land Commission Awards (LCAs) were accessed via Waihona ‘Aina Corporation’s Māhele database (Waihona ‘Aina 2000), the Office of Hawaiian Affairs (OHA) Papakilo Database (Office of Hawaiian Affairs 2015), and the Ava Konohiki Ancestral Visions of ‘Āina website (Ava Konohiki 2015).

## 2.2 Community Consultation

### 2.2.1 Scoping for Participants

We begin our consultation efforts with utilizing our previous contact list to facilitate the interview process. We then review an in-house database of *kūpuna* (elders), *kama‘āina*, cultural practitioners, lineal and cultural descendants, Native Hawaiian Organizations (NHOs; includes Hawaiian Civic Clubs and those listed on the Department of Interior’s NHO list), and community groups. We also contact agencies such as SHPD, OHA, and the appropriate Island Burial Council where the proposed project is located for their response on the project and to identify lineal and cultural descendants, individuals and/or NHO with cultural expertise and/or knowledge of the study area. CSH is also open to referrals and new contacts.

### 2.2.2 “Talk Story” Sessions

Prior to the interview, CSH Cultural Researchers explain the role of a CIA, how the consent process works, the project purpose, the intent of the study, and how their ‘*ike* (knowledge) and *mana‘o* (thought, opinion) will be used in the report. The interviewee is given an Authorization and Release Form to read and sign.

“Talk Story” sessions range from the formal (e.g. sit down and *kūkākūkā* [consultation, discussion] in participants choice of place over set interview questions) to the informal (e.g. hiking to cultural sites near the study area and asking questions based on findings during the field outing). In some cases, interviews are recorded and transcribed later.

CSH also conducts group interviews, which ranges in size. Group interviews usually begin with set, formal questions. As the group interview progresses, questions are based on interviewee’s

answers. Group interviews are always transcribed and notes are taken. Recorded interviews assist the Cultural Researcher in 1) conveying accurate information for interview summaries, 2) reducing misinterpretation, and 3) missing details to *mo‘olelo*.

CSH seeks *kōkua* (assistance) and guidance on identifying past and current traditional cultural practices of the study area. Those aspects include: general history of the *ahupua‘a*; past and present land use of the study area; knowledge of cultural sites (for example, *wahi pana*, archaeological sites, and burials); knowledge of traditional gathering practices (past and present) within the study area; cultural associations (*ka‘ao* and *mo‘olelo*); referrals; and any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the study area.

### 2.2.3 Completion of Interview

After an interview, CSH Cultural Researchers transcribe and create an interview summary based on information provided by the interviewee. Cultural Researchers give a copy of the transcription and interview summary to the interviewee for review and ask to make any necessary edits. Once the interviewee has made those edits, we incorporate their *‘ike* and *mana‘o* into the report. When the draft report is submitted to the client, Cultural Researchers then prepare a finalized packet of the participant’s transcription, interview summary, and any photos that were taken during the interview. We also include a thank you card and honoraria. This is for the interviewee’s records.

It is important to CSH Cultural Researchers to cultivate and maintain community relationships. The CIA report may be completed, but CSH Researchers continuously keep in touch with the community and interviewees throughout the year—such as checking in to say hello via email or by phone, volunteering with past interviewees on community service projects, and sending holiday cards to them and their *‘ohana* (family). CSH Researchers feel this is an important component to building relationships and being part of an *‘ohana* and community.

“*I ulu no ka lālā i ke kumu*—the branches grow because of the trunk,” an *‘ōlelo no‘eau* (#1261) shared by Mary Kawena Pukui with the simple explanation: “Without our ancestors we would not be here” (Pukui 1983:137). As Cultural Researchers, we often lose our *kūpuna* but we did not lose their wisdom and words. We routinely check obituaries and gather information from other informants if we have lost our *kūpuna*. CSH makes it a point to reach out to the *‘ohana* of our fallen *kūpuna* and pay our respects including sending all past transcriptions, interview summaries, and photos for families to have on file for genealogical and historical reference.

# Section 3 Traditional Accounts

## 3.1 *Nā Ka‘ao a me Nā Mo‘olelo* (Legends and Stories)

Hawaiian storytellers of old were greatly honored; they were a major source of entertainment and their stories contained lessons while interweaving elements of Hawaiian lifestyles, genealogy, history, relationships, arts, and the natural environment (Pukui and Green 1995:IX). According to Pukui and Green (1995), storytelling is better heard than read for much becomes lost in the transfer from the spoken to the written word and *ka‘ao* are often full of *kaona* or "double meanings."

*Ka‘ao* are defined by Pukui and Elbert (1986:108) as a "legend, tale […], romance, [and/or], fiction." *Ka‘ao* may be thought of as oral literature or legends, often fictional or mythic in origin, and have been "consciously composed to tickle the fancy rather than to inform the mind as to supposed events" (Beckwith 1970:1). Conversely, Pukui and Elbert (1986:254) define *mo‘olelo* as a "story, tale, myth, history, [and/or] tradition." The *mo‘olelo* are generally traditional stories about the gods, historic figures or stories which cover historic events and locate the events with known places. *Mo‘olelo* are often intimately connected to a tangible place or space (*wahi pana*).

In differentiating *ka‘ao* and *mo‘olelo* it may be useful to think of *ka‘ao* as expressly delving into the *wao akua* (realm of the gods), discussing the exploits of *akua* (gods) in a primordial time. *Mo‘olelo* on the other hand, reference a host of characters from *ali‘i* (royalty) to *akua*; *kupua* (supernatural beings) to *maka‘āinana* (commoners); and discuss their varied and complex interactions within the *wao kānaka* (realm of man). Beckwith elaborates, "In reality, the distinction between *ka‘ao* as fiction and *mo‘olelo* as fact cannot be pressed too closely. It is rather in the intention than in the fact" (Beckwith 1970:1). Thus a so-called *mo‘olelo*, which may be enlivened by fantastic adventures of *kupua*, "nevertheless corresponds with the Hawaiian view of the relation between nature and man" (Beckwith 1970:1).

Both *ka‘ao* and *mo‘olelo* provide important insight into a specific geographical area, adding to a rich fabric of traditional knowledge. The preservation and passing on of these stories through oration remains a highly valued tradition. Additionally, oral traditions associated with the study area communicate the intrinsic value and meaning of a place, specifically its meaning to both *kama‘āina* as well as others who also value that place.

The following section presents traditional accounts of ancient Hawaiians living in the vicinity of the project area. Many relate an age of mythical characters whose epic adventures inadvertently lead to the Hawaiian race of *ali‘i* and *maka‘āinana*. The *ka‘ao* in and around the project area shared below are some of the oldest Hawaiian stories that have survived; they still speak to the characteristics and environment of the area and its people.

### 3.1.1 ‘Ai‘ai, Son of Kū‘ula the God of Fishermen

Kū‘ula (god of fishermen), his wife Hinapukui‘a, his brother Ku‘ulauka (god of cultivators), and Hina‘ulu‘ōhi‘a (goddess of forest growth, sister of Hinapukui‘a, and wife of Ku‘ulauka) lived in and around Hāna. Kū‘ula served as head fisherman under Chief Kamohoali‘i. At the time of his death, Kū‘ula prepared for the future by instructing his son, ‘Ai‘ai, on establishing fishing stations in the islands, and how to attract fish. Kū‘ula gave ‘Ai‘ai his magic objects including: "a decoy stick called Pahiakukahuoi (-kahuai), a cowry called Leho-ula, a hook called Manai-a-ka-lani, and

a stone called Kū‘ula which, if dropped into a pool, had the power to draw the fish thither" (Beckwith 1970:19). ‘Ai‘ai traveled around Maui returning fish to the *ko‘a* (fishing ground or station) of the island by erecting *kū‘ula* (stone god used to attract fish) and by teaching local people the best fishing techniques (Beckwith 1970:20).

Another type of legend concerns the many fishing-related activities, such as fishpond building and fishhook and octopus lure making, which were taught to humans by Kū‘ula and his son ‘Ai‘ai. In one account Kū‘ula, a legendary resident of Hāna, builds Hawaii's first fishpond at the base of Ka Iwi o Pele. However, a chief of Hāna becomes angry with Kū‘ula who escapes, along with his wife, to the sea where they turn into fish. It is left up to his son ‘Ai‘ai to travel the islands and teach humans his father's techniques, as well as how to worship Kū‘ula. Fishing shrines, or *ko‘a* are found on all the islands. They contain *ku‘ula* stones, which are usually oblong water-rounded boulders. The *ko‘a ku‘ula* are stone altars or houses for rites to attract and cause fish to multiply and to ensure a good catch (Kawaharada 1999:6).

### 3.1.2 Eleio and the Ghost of ‘O‘opuola

Eleio was the messenger of the king of Maui, called Kaka‘alaneo. He was known for his speed and was sent each morning to Hāna to bring ‘*awa* back to the king who lived in Lāhainā. According to *mo‘olelo*, "As soon as the order was given, Eleio would run off with great speed, all the way from Lahaina to Hana. The distance between these two places is about forty miles. It is said in the legend that Eleio could beat the wind in speed" (Fornander 1919:434).

One day during Eleio's journey from Lāhainā to Hāna, he was stopped by the ghost Ka‘ahuali‘i, who lived in the wilderness of ‘O‘opuola in East Makaīwa Ahupua‘a.

> In one of his trips to Hana, he met Kaahualii, a ghost, who lived in the wilderness of Oopuola. When the ghost met him, he asked that he be given some of the awa, but Eleio insulted him by telling him to take the hairs of his body and use it for his awa.
>
> When Kaahualii heard this, he gave chase, believing that he could catch Eleio; but he was unable to catch him who ran much faster.
>
> When Eleio came to Kakaalaneo, he saw that the meal, the awa for which he was sent, was being served. On his return from Hana Eleio while running was preparing the awa at the same time, so when he entered the house, he placed the awa in the cup, strained it and placed the cup to the mouth of Kakaalaneo. Kakaalaneo was thus enabled to drink his awa before he began on his meal.
>
> Because of this Eleio was noted for his great speed and the people of the present generation think the story to be true. [Fornander 1919:434]

### 3.1.3 The Legend of the Great Eel

‘Ai‘ai follows in the footsteps of his father, using his knowledge and power and his magic objects to set up new fishing grounds around the islands. In his travels, he makes a fishing ground in Hāna:

> The first fishing ground marked out by 'Aiai is that of the Hole-of-the-Ulua where the great eel hid. A second lies between Hāmoa and Hanao‘o in Hāna, where fish

> are caught by letting down baskets into the sea. A third is Koa-uli in the deep sea. A fourth is the famous akule fishing ground at Wana-ula mentioned above. At Honomaele he places three pebbles and they form a ridge where aweoweo fish gather. At Waiohue he sets up on a rocky islet the stone Paka to attract fish. From the cliff of Puhi-ai he directs the luring of the great octopus from its hole off Wailua-nui by means of the magic cowry shell and the monster is still to be seen turned to stone with one arm missing, broken off in the struggle. Leaving Hāna, he establishes fishing stations and altars along the coast all around the island as far as Kipahulu ... [Beckwith 1970:21-23].

### 3.1.4 Legends of Pele in Hāna

Pu‘uhele, a sister of Pele, was said to have been brought to Hāna as a child, but was left behind because she continually bit the breast as she was being fed. The place where she stayed was Pu‘u Ka‘uiki. In another version, she is not born as human, but as a bloody fetus, which was thrown away by Pele and another of her sisters. Pu‘uhele landed at Nu‘u, and was turned into a beautiful woman who traveled to Wananalu, where she was killed for trespassing. The hill Ka‘uiki rises from the spot where she was buried (Cleghorn and Rogers 1987:6). Legendary references mostly concern geomorphologic features such as Pu‘u Ka‘uiki and the Pu‘u Ka Iwi o Pele. One legendary account concerning the creation of Pu‘u Ka‘uiki tells of a sister of the goddess Pele, Pu‘uhele (wandering hill), being left behind at Hāna, becoming Ka‘uiki Hill. In another legend, Pu‘uhele is killed and Ka‘uiki rises from the burial place (Fornander 1919:508).

Ka ‘Iwi o Pele (the bones of Pele ), the hill or *pu‘u* east of Hāna Highway, also has a number of origin legends. One relates that Pele was driven from her original homeland by one of her sisters, Namakaokahai, for having a love affair with her brother-in-law. Pele is pursued by Namakaokahai and killed: her physical remains form the hill of Ka Iwi o Pele. Another legend relates that Pele, looking for a home, pauses at each of the Hawaiian Islands and, while at Haleakalā, creates various parts of Maui including Ka ‘Iwi o Pele and ‘Alau Island just off the coast (Fornander 1919:506).

## 3.2 *Nā Wahi Pana* (Storied Places)

*Wahi pana* are legendary or storied places in a landscape. These legendary or storied places can be a variety of natural or human-constructed features. Oftentimes dating to the pre-Contact period, many but not all *wahi pana* are connected to particular *mo‘olelo*. Dr. Davianna McGregor outlines the types of natural and human-made structures that may constitute *wahi pana*:

> Natural places have mana or spiritual power, and are sacred because of the presence of the gods, the akua, and the ancestral guardian spirits, the ‘aumakua. Human-made structures for the Hawaiian religion and family religious practices are also sacred. These structures and places include temples, and shrines, or heiau, for war, peace, agriculture, fishing, healing, and the like; pu‘uhonua, places of refuge and sanctuaries for healing and rebirth; agricultural sites and sites of food production such as the lo‘i pond fields and terraces slopes, ‘auwai irrigation ditches, and the fishponds; and special function sites such as trails, salt pans, hōlua slides, quarries, petroglyphs, gaming sites, and canoe landings. [McGregor 1996:22]

3.2.1.1 *Nā Inoa ‘Āina (Place Names)*

| Place | Type |
|---|---|
| Helani | *pu‘u pele* (lava pit) |
| Holoināwāwae | *Kahawai* (stream) |
| Ka‘inalimu | *wahi* (place)/*kai kū‘ono* (bay/inlet) |
| Kani‘omoku | *‘ili ‘āina* (smaller land division) |
| Kani‘omoku | *heiau* (traditional place of worship) |
| Kauleilepo | *heiau* |
| Kauleiula | *heiau* |
| Kawaipapa | *ahupua‘a, heiau, kahawai* |
| Keaniani | *lae* (point), *nalu* (wave) |
| Keonihale | *‘ili ‘āina* |
| Lauulu | *lae* |
| Luahaloa | *lae* |
| Nalowale | *heiau* |
| Nanualele | *lae* |
| Niu | *‘ili ‘āina* |
| Polikane | *‘ili ‘āina* |
| Puohai | *‘ili ‘āina* |
| Umalei P | *lae* |
| Waihonu | *Loko* (pond, lake, pool) |
| Waipunalaea | *loko* |

### 3.2.2 *Heiau*

*Heiau* are traditional places of worship. Construction of some *heiau* were elaborate and large communal structures, while others were simple earth terraces or shrines (McAllister 1933:8). *Heiau* are most commonly known to be where important ceremony took place and are large structures with platforms or altars comprised of one or more terraces (McAllister 1933:8). The following descriptions chronical a number of *heiau* within or near the project area.

3.2.2.1 *Kauleilepo-Kauleula*

This *heiau* was located on the point of rocks just north of Hana Bay at Kainalimu. It is described as follows:

> A twin or double heiau consisting of two elevated open platforms connected by a causeway. The larger is toward the sea and measures 42 x 54 feet The causeway is 25 feet long, 8 feet high nd [sic.] 4 feet wide. On the other end is the smaller platform 22 x 25 feet and slightly lower than the front one. The south side of the larger has been terraced to a height of 15 feet. Construction is of water-worn boulders with pieces of Aa lava and coral sprinkled over the top. Modern houses

> and sheds have been built on the front of the heiau thus destroying much of the surface platform. [Walker 1931]

3.2.2.2 *Kauleiula*

This *heiau* was located approximately 50 yards east of “Site” on Nānu‘alele point. It is described as follows:

> A stone platform on a rise of ground 6 to 8 feet high. It measures 60 x 95 feet and there is an additional 30 feet of level hill-top which may have been included in the heiau. On the side below the hill is a large natural pond, one of several in that vicinity. A path of stepping-stones leads across this pond and up onto the hill, crossing one corner of the heiau. The heiau is built of chunks of lava and water-worn boulders. There is a low wall on one end and several terraced platforms as can be seen in the plan shown in figures (23). Two of these at lease, are graves. A house enclosure 12 x 25 feet is set an angle with the heiau platforms and does not seem to conform to the general plan of the heiau. The interior of the heiau is lower than the sides, but many of the terrace edges have been broken and the stones removed for other purposes. [Walker 1931]

### 3.2.3 Ke Alaloa o Maui

Kiha-a-Pi‘ilani “is credited with finishing the paved road around the island (Ke Alaloa o Maui), which his father (Pi‘ilani) had begun” (Griffin 1987:9). The paved roadway was utilized in Hāmākua Loa by a group of missionaries touring Maui in 1828.

> ...having descended from the summit of Haleakala, they came down to a small village on the Halehaku seashore. On the next day, proceeding toward Hana, they came upon ‘a pavement said to have been built by Kihapiilani, a king contemporary with Umi, an ancient king of Hawaii ... It extends more than 30 miles, and is a work of considerable magnitude. This pavement afforded us no inconsiderable assistance in traveling as we ascended and descended a great number of steep and difficult paries (palis)’ ... [Kuykendall 1938:4]

In describing the building of Kiha-a-Pi‘ilani’s road Beckwith (1970:387) states, “men are said to have stood in line and passed stones from seashore to upland.” Once the road was paved however, residents of Hāmākua Loa most likely benefitted from having access to the road and to the people traveling through the district, particularly given its location between Wailuku and Hāna, two prominent political centers during the last two centuries of pre-Contact Hawaiian history.

The Alaloa also served as an instrument of transportation in wartime, which during the last half of the eighteenth century, was very frequent. During these times, the people of Hāmākua Loa and the surrounding districts (between Hāna and Wailuku) who were situated near the war path including canoe landings, the Alaloa and the cultivated and inhabited places in between were subject to plundering by warring chiefs. Kamakau (1992:230) remarks on the impacts of war on the commoners, “wars were frequent in old days and entailed robbery and murder of the common people.” Between 1778 and 1779, Kalani‘ōpu‘u invaded Hāmākua Loa after purportedly being provoked by a resident.

> As he was sailing just off Kahakuloa, a certain man was sitting on the crest of Pu‘ukoa‘e, and as the war canoes came in sight the man made a gesture of contempt ... At Hamakualoa Ka-lani-‘opu‘u landed and engaged in battle, but Ka-hekili hastened to the aid of his men, and they put up such a fierce fight that Ka-Iani-‘opu‘u fled to his canoes. Landing at Ko‘olau he slew the common people and maltreated the captives by urinating into their eyes. [Kamakau 1992:91]

## 3.3 *Nā Mele* (Songs)

The following section draws from the Hawaiian art of *mele*, poetic song intended to create two styles of meaning.

> Words and word combinations were studied to see whether they were auspicious or not. There were always two things to consider the literal meaning and the *kaona*, or ‘inner meaning.’ The inner meaning was sometimes so veiled that only the people to whom the chant belonged understood it, and sometimes so obvious that anyone who knew the figurative speech of old Hawai‘i could see it very plainly. There are but two meanings: the literal and the *kaona*, or inner meaning. The literal is like the body and the inner meaning is like the spirit of the poem. [Pukui 1949:247]

> The Hawaiians were lovers of poetry and keen observers of nature. Every phase of nature was noted and expressions of this love and observation woven into poems of praise, of satire, of resentment, of love and of celebration for any occasion that might arise. The ancient poets carefully selected men worthy of carrying on their art. These young men were taught the old *meles* and the technique of fashioning new ones. [Pukui 1949:247]

*Mele* or songs, like *oli*, can take on various styles, various meanings, and be interconnected all the while being pleasant to the ear. Some styles of *mele* include *mele aloha* (a love song), *mele ho‘ohanohano* (an honorific chant), *mele wahi pana* (song honoring storied places), and etc. The beauty and style of *mele Hawai‘i* or Hawaiian songs is the ability to have layers of multiple facets. For example, many *mele aloha* can include the aspects of *wahi pana*. Therefore, these *mele* can be classified as a *mele aloha* and a *mele wahi pana*.

> Through mele and kaona [hidden meanings], kupa o ka ‘āina [natives of the land] described the beauty of the mountains, the sound of the ocean, and the flow of the sunset […] Inspired by their intimate knowledge of the landscape, haku mele (musical composers) masterfully enumerated the ‘ōlelo no‘eau, winds, rains, and place names associate with the places glorified in their compositions’ [Oliveria 2014:67]

### 3.3.1 Hana No E Ka ‘Oi

The following *mele* was written by John Pi‘ilani Watkins and mentions Hāna as a home of chiefs with fragrant flowers.

| | |
|---|---|
| *‘O Hana no e ka ‘oi* | Hana is the best |
| *Ka home o na ali‘i* | Home of the chiefs |

| | |
|---|---|
| *E ku‘u ‘āina hānau eia la* | Land of my birth |
| *‘O Hana no e ka ‘oi* | Hana is the best of |
| *Maui no e ka ‘oi* | Maui, the best of the islands |
| | |
| *E ku‘u lei lokelani* | My rose wreath |
| *Ua ‘ako nei ‘ia no ‘oe* | Fashioned for you |
| *E ku‘u pua ‘ala onaona la* | My flowers, so fragrant |
| *‘O Hana no e ka ‘oi* | Maui, the best of the islands |
| | |
| *He pu‘u kau mai i luna* | The hill above |
| *I lalo nei ‘o Ka‘uiki* | Ka‘uiki, and below |
| *He ala nui kīke‘eke‘e la* | The winding road |
| *‘O Hana no e ka ‘oi* | Hana is the best of |
| *Maui no e ka ‘oi* | Maui, the best of the islands |
| | |
| *Ha‘ina mai ka puana* | Tell the refrain |
| *E ku‘u lei lokelani* | My rose wreath |
| *E ku‘u ‘āina hānau eia la* | Land of my birth |
| *‘O Hana no e ka ‘oi* | Hana is the best of |
| *Hana no e ka ‘oi* | Maui, the best of the islands |
| | |
| *Malama* | Take care |
| *E ku‘u ‘āina* | Of my land |
| | [huapala.org] |

### 3.3.2 Na Ka Pueo

This *mele* was written by Billy Ali‘iloa Lincoln. The Pueo Kahi was a ship named for village near Hāna (huapala.org). As mentioned on huapala.org, “a ship, boat, or canoe in Hawaiian mele is a poetic reference to a woman”.

| | |
|---|---|
| *Na ka Pueo kahi ke aloha* | The Pueo is my one love |
| *Nēnē ‘aukai o Maui* | The seafaring gull of Maui |
| *Kōwelo ko hae Hawai‘i* | The Hawaiian flag flutters |

| | |
|---|---|
| *Ma ka ‘ilikai a‘o Māmala* | Over the surface of Mamala Bay |
| *Malama iho ‘oe ke aloha* | Take care of my love |
| *Kuleana no‘ue hiki aku au* | That‘s mine until I return |
| *Ha;ina ‘ia mai ka puana* | The story is told |
| *Na ka Pueo kahi ke aloha* | Of the ship, Pueo that I love |
| | [huapala.org] |

### 3.3.3 Hāna Chant

| | |
|---|---|
| *Kāua i ka la‘i Hāna ke aloha ē* | Two of us in love, in the peacefulness of Hāna |
| *Ha‘aheo o Hāna lā* | Proud of Hāna |
| *E mai e pili mai ē* | Come, let us be close |
| *Ha‘aheo o Hāna lā* | Proud is Hāna |
| *Ka‘i ‘ana e kilohi ia Ka‘uiki la* | Let us go and gaze at Ka‘uiki |
| *Ku‘u pu‘u Ka‘uiki la* | My hill of Ka‘uiki |
| *Pulupe i ka noe mili me ka ‘ehukai* | Drenched by the mist of the sea spray |
| *Ku‘u pu‘u Ka‘uiki la* | My hill of Ka‘uiki |
| | |
| *‘A‘ala i ka loke mapu nui ana ē* | The wafted fragrance of the rose is overwhelming |
| *Ku‘u lei lokelani la* | My rose lei |
| *Ka lei wehi wale honi i ke kino ē* | The lei, a decoration for my body |
| *Ku‘u lei lokelani la* | My rose lei |
| *E nanea i ka malu o Kahili ē* | Relaxing in the shade of Kahili |
| *Ke ali‘i la* | The chief |
| *Ho‘ohali‘a aloha i ke au kahiko ē* | Remembrances of my old (first love) |
| *Ke ali‘i la* | The chief |
| | |
| *Puana ‘ia mai poina ‘ole ē* | The refrain, unforgettable |
| *Eia ‘eā la* | Here |
| *Kāua i ka la‘i Hana ke aloha ē* | Two of us in love, in the peacefulness of Hana |

| | |
|---|---|
| *Eia ‘eā la* | Here |
| *Ka‘i ‘ana e kilohi ia Ka‘uiki ē* | Let us go and gaze at Ka‘uiki |
| *E ō* | I call, you answer |
| *Ha‘aheo Hana la* | Proud is Hana |
| *Eia ‘eā la e ō* | Here; I call, you answer |
| | [huapala.org] |

## 3.4 *‘Ōlelo No‘eau* (Proverbs)

Hawaiian knowledge was shared by way of oral histories. Indeed, one’s *leo* (voice) is oftentimes presented as *ho‘okupu* (“a tribute or gift” given to convey appreciation, to strengthen bonds, and to show honor and respect); the high valuation of the spoken word underscores the importance of the oral tradition (in this case, Hawaiian sayings or expressions), and its ability to impart traditional Hawaiian “aesthetic, historic, and educational values” (Pukui 1983:vii). Thus, in many ways these expressions may be understood as inspiring growth within reader or between speaker and listener:

> They reveal with each new reading ever deeper layers of meaning, giving understanding not only of Hawai‘i and its people but of all humanity. Since the sayings carry the immediacy of the spoken word, considered to be the highest form of cultural expression in old Hawai‘i, they bring us closer to the everyday thoughts and lives of the Hawaiians who created them. Taken together, the sayings offer a basis for an understanding of the essence and origins of traditional Hawaiian values. The sayings may be categorized, in Western terms, as proverbs, aphorisms, didactic adages, jokes, riddles, epithets, lines from chants, etc., and they present a variety of literary techniques such as metaphor, analogy, allegory, personification, irony, pun, and repetition. It is worth noting, however, that the sayings were spoken, and that their meanings and purposes should not be assessed by the Western concepts of literary types and techniques. [Pukui 1983:vii]

Simply, *‘ōlelo no‘eau* may be understood as proverbs. The Webster dictionary notes it as “a phrase which is often repeated; especially, a sentence which briefly and forcibly expresses some practical truth, or the result of experience and observation.” It is a pithy or short form of folk wisdom. Pukui equates proverbs as a treasury of Hawaiian expressions (Pukui 1995:xii). Oftentimes within these Hawaiian expressions or proverbs are references to places. This section draws from the collection of author and historian Mary Kawena Pukui and her knowledge of Hawaiian proverbs describing *‘āina* (land), chiefs, plants, and places. *‘Ōlelo no‘eau* specific to Kawaipapa and the broader Hāna Moku is listed below.

### 3.4.1 *‘Ōlelo No‘eau* #132

> ‘A‘ohe e loa‘a Niu-a-Kāne ia ‘oe.
>
> *You‘ll never be able to reach Kāne’s coconuts.*
>
> Said of something unattainable. Niu-a-Kāne is a rock islet in the sea at Hāna, Maui. [Pukui 1983:17]

### 3.4.2 *‘Ōlelo No‘eau* #451

Hāna i ka i‘a iki.

*Hāna of the little fish.*

Hāna was known in ancient times as the land where fish were scarce. Believing slanderous tales about Ku‘ula and his wife, Hinahele, the ruling chief of Hāna ordered them destroyed. Having *mana* over the fish of the sea, the two caused a scarcity until their son ‘Ai‘ai brought them back to life. Ku‘ula and Hinahele were worshipped as deities by fishermen. [Pukui 1983:54]

### 3.4.3 *‘Ōlelo No‘eau* #460

Hāna, mai Ko‘olau a Kaupō.

*Hāna, from Ko‘olau to Kaupō.*

The extent of the district of Hāna, Maui. [Pukui 1983:55]

### 3.4.4 *‘Ōlelo No‘eau* #468

Haneo‘o amo one.

*Sand-carrying Haneo‘o.*

An epithet applied to the *kauwā* [outcast] of Haneo‘o, Hāna, Maui. [Pukui 1983:56]

### 3.4.5 *‘Ōlelo No‘eau* #1151

I ‘auhe‘e o Ka‘uiki i ka wai ‘ole.

*Kau‘iki was defeated for the lack of water.*

When ‘Umi, ruler of Hawai‘i, went to Hāna to battle against Lono-a-Pi‘ilani of Ka‘uiki, thirst weakened the Maui warriors. Often used later to mean “without water or the needed supplies we cannot win.” [Pukui 1983:125]

### 3.4.6 *‘Ōlelo No‘eau* #1289

Ka haka o ka moa kāne, ua kau ‘ia e ka moa wahine.

*The perch of the cock is now occupied by a hen.*

Said by Puna, whom Kalaniōpu‘u placed as governor in Hāna, Maui. Mahihelelima wanted Puna out of the way and lied that Kalaniōpu‘u had sent word for Puna to meet him in Hawai‘i at once. When Puna arrived in Hawai‘i, he discovered that he had been duped and that Ka‘uiki hill in Hāna had been taken by the Maui chiefs in the meantime. The saying was later used to mean that a superior worker had been replaced by another who was not as good. [Pukui 1983:141]

### 3.4.7 *‘Ōlelo No‘eau* #1388

Kaihalulu i kea lo o Ka‘uiki.

*Kaihalulu lies in the presence of Ka‘uiki.*

Said of a person who is always found in the company of another. Kai-halulu (Roaring-sea) is a place that lies before Ka‘uiki hill in Hāna, Maui. [Pukui 1983:151]

### 3.4.8 *‘Ōlelo No‘eau* #1494

Ka nalu he‘e o Pu‘uhele.

*The surf of Pu‘uhele that is ridden.*

Pu‘uhele is a place in Hāna, Maui, where there is good surfing. [Pukui 1983:162]

### 3.4.9 *‘Ōlelo No‘eau* #1566

Ka ua kea o Hāna.

*The white rain of Hāna.*

Refers to the misty rain of Hāna, Maui, that comes in from the sea. [Pukui 1983:169]

### 3.4.10 *‘Ōlelo No‘eau* #1578

Ka ua Laniha‘aha‘a o Hāna.

*The Rain-of-the-low-sky of Hāna.*

Refers to Hāna, Maui. Once, the young warrior chief Ka‘eokulani ran to a banana grove to escape a sudden squall. As he stood safe and dry in the shelter of the banana leaves he lifted his spear. It accidentally pierced through the leaves and a trickle of water came through. He remarked that the sky where he stood was so low he had pierced it. [Pukui 1983:170]

### 3.4.11 *‘Ōlelo No‘eau* #1660

The following *‘ōlelo no‘eau* mentions a way of communication for the people of Kawaipapa while fishing.

Kawaipapa mūki.

*Kaiwapapa of sibilant sounds.*

When fishing, the natives of Kawaipapa, Hāna, Maui made smacking sounds with the lips rather than call out or speak to one another. [Pukui 1983:179]

### 3.4.12 *‘Ōlelo No‘eau* #2124

O Hāna ia, he ‘āina au pehu.

*That is Hāna, land where lack was known.* [Pukui 1983:258]

### 3.4.13 *‘Ōlelo No‘eau* #2548

O Wananalua ia ‘āina; o Punahoa ka wai; o Ka‘uiki ka pu‘u.

*Wananalua is the land; Punahoa is the pool; Ka‘uiki is the hill.*

Noted places in Hāna. [Pukui 1983:278]

# Section 4 Historical Accounts

## 4.1 Pre- and Early Post Contact

The division of Maui’s lands into political districts first occurred during the rule of Kaka‘alaneo under the direction of his *kahuna* named Kalaiha‘ōhi‘a (Beckwith 1970:383). The *moku o loko*, or *moku* as it is most commonly called, literally means “to cut across, divide, separate” (Lucas 1995:77). When used as a term of traditional land tenure, a *moku* is similar to a political district that can contain smaller divisions of land such as *‘okana*, *kalana*, *ahupua‘a*, *‘ili*, and *mo‘o*.

The project site occupies a heavily storied traditional landscape *mauka* (from the mountain ridges) to *makai* (to the ocean reef) that was also rich in natural resources, masterfully engineered with agricultural/aquacultural systems and trail networks, densely populated, and favored and warred over by ruling *ali‘i* (elites) (Beckwith 1970:40; Handy and Handy 1972:206, 505).

Chief Pi‘ilani united all of Maui under his rule during the sixteenth or seventeenth century. Pi‘ilani’s sons, Lonopi‘ilani and Kiha-a-Pi‘ilani, fought for control of Maui. Kiha-a-Pi‘ilani eventually took refuge at Hāna. While in Hāna, Kiha-a-Pi‘ilani took as his wife Koleamoku, who had been betrothed to Lonopi‘ilani, which again put the two brothers to warring. Kiha-a-Pi‘ilani and his wife Koleamoku fled to Hawai‘i Island to enlist the aid of ‘Umi. ‘Umi was married to Pi‘ikea, the daughter of Pi‘ilani (sister of Lonopi‘ilani and Kiha-a-Pi‘ilani), a marriage that had formerly brought peace between the islands of Hawai‘i and Maui. However, ‘Umi sided with Kiha-a-Pi‘ilani and sent an invasion fleet to Hāna. In Hāna, at Ka‘uiki, Lonopi‘ilani’s forces, under the command of Ho‘olaemakua, withstood the Hawai‘i forces for a while until a nighttime raid overwhelmed them. With this battle, Kiha-a-Pi‘ilani gained control of Maui.

Maui chiefs ruled Hāna until its conquest in the mid–18th century by Hawai‘i Island’s Chief Kalani‘ōpu‘u (Kamakau 1992:85−87). Decades of war between the island polities ensued, with Maui Chief Kahekili resuming rule of Hāna and all Maui until their conquest and incorporation into the united kingdom of Hawai‘i by Kamehameha in 1790 (Ulukau 2021a). During the last half of the 18th century the battles between Maui and Hawai‘i were carried on by the high chiefs Kahekili of Maui and Kalani‘ōpu‘u of Hawai‘i. Kalani‘ōpu‘u was in control of the Hāna and Kipahulu areas from ca. 1759 to 1765 when Kahekili won out. However, the Hawai‘i forces were able to regain control from ca. 1775 to 1783 (Kamakau 1992:83-84). In 1778, when Captain James Cook’s ships returned from their North American explorations, they stopped off Hāna but didn’t land (Beaglehole 1967:582-583). With the death of Kalani‘ōpu‘u in 1782, Kahekili regained control of Hāna, which he retained, though not without further battles with Hawai‘i Island forces (i.e. Kamehameha), until his death in 1794 (Kamakau 1992:88-91). With the death of Kahekili and the assistance of newly acquired foreign power (canons, muskets, men) Kamehameha gained control not only of Maui, but of all the Hawaiian Islands, except Kaua‘i, by 1795 (Kamaukau 1992:171). Hāna is also associated with the *ali‘i nui* (supreme elite) Ke‘eaumoku Papaiaheahe and his *‘ohana*. His daughter, born at Pu‘u Ka‘uiki in the late 18th century, became Queen Ka‘ahumanu, wife of Kamehameha I (Kapiikauinamoku in *The Honolulu Advertiser*).

### 4.1.1 Battle at Pu‘u Koa‘e

Around 1790, Kamehameha and his forces landed on Maui at Hāna. After having invaded Hāna, Kamehameha's forces traveled to Hāmākua Loa. Kalanikupule, ruling chief of Maui at the time, sent his warrior Kapakahili to resist the invasion.

> When Kalanikupule heard of the landing of Kamehameha at Hana, and that he was marching with his force through the Koolau district, he sent Kapakahili with the best troops he had through the Hamakua districts to meet and resist the progress of the invader. [Fornander 1969:2:236]

> The battle met at a small hill called "Bosun-bird Hill" (Pu‘ukoa‘e) situated on the makai side of Pu‘umaile at Hanawana in Hoalua, and Kapakahili was defeated. In the evening Kamehameha beached at Halehaku, went ashore, and built temporary shelters just where he stepped foot. The feather god Kuka‘ilimoku encouraged him to fight, for its feathers bristled and stood upright in the direction of Hinawaikoli‘i; Kamehameha therefore lost his fear of a fight with slingshot. The next morning he saw through the koa and hala trees the red gleam of feather capes. It is said that he narrowly escaped defeat by Kapakahili's company. But reinforcements came up, Kamehameha put the enemy to flight, and pursued them along the main road or they would have rejoined their fellow warriors at Kokomo. At the ascent of ‘Opaepilau, Kapakahili was exhausted and was overtaken. "Slain by Pipili," Kamehameha boasted over him. [Kamakau 1961:148]

> Of the campaign in Hamakualoa some momentos are still pointed out. The fortified position at Pu‘ukoa‘e on Hanawana, which was attacked and taken by Kamehameha, who had brought his fleet round from Hana. The hill is known as "Kapuai-o-Kamehameha," to the west of the Halehaku stream, where he encamped for the night after taking Puukoae ... the Maui forces were routed and fled as far as Kokomo, where a final stand was made. [Fornander 1969:2:236]

### 4.1.2 Battle of Great Canoes

In 1790, Kamehameha then began to muster his armies for a planned invasion of Maui. That summer, Kamehameha landed at Hāna. In a battle known as "Kaua o Kawa‘anui," (Battle of Great Canoes) Kamehameha defeated the Maui advanced guard there, after which he sailed for Hāmākua Loa, sweeping the remaining Maui defenders along the coast and back into ‘Īao Valley, and annihilating them at the battle called "Kaua i Kapaniwai o ‘Īao," (Battle of the Dammed Water of ‘Īao), during which the slain warriors were said to have been so numerous, that they dammed the water of ‘Īao Stream. Kamehameha then returned to Hawai‘i to settle disputes there. In his absence, both Kahekili and the High Chief of Kaua‘i, Ka‘eokūlani formed an alliance to retake Hāna. After that success, both chiefs launched an attack on Kamehameha at Waipi‘o on Hawai‘i, where they were both defeated. After the death of Kahekili in 1793, Kamehameha assumed the rule over all of Maui, through his victory over the High Chief Kahekili's successor, the High Chief Kalanikūpule, in the battle of Nu‘uanu on O‘ahu in 1795 (McGregor 2007:99).

### 4.1.3 Landing of the Canoes

Samuel M. Kamakau provides a passing reference in the context of the fleet of the Hawai‘i Island chief ‘Umi-a-Līloa coming to the aid of the Maui chief Kiha-a-Pi‘ilani in his fighting against Lono- a-Pi‘ilani and the Hāna chief Ho‘olaemakua. The Hāna chief initially repulsed the landings of the Hawai‘i Island canoes and ‘Umi-a-Līloa asks how best to get his men ashore:

> Kiha-a-Pi‘ilani answered, “There is a small harbor at Ko‘olau called Wailua-iki, and if all the canoes can not land there, there is another landing at Wailua-nui.” The blocked canoes turned about and sailed for Wailua-iki at Ko‘olau.
>
> When the canoes reached Wailua-iki, they were dismantled and set upright, and in that way the innumerable war canoes from Hawai‘i could be beached. After all the canoes were beached the men began to go overland to the site of the battle [at Ulaino well to the southeast] [Kamakau 1961:29-30]

When ‘Umi-a-Līloa’s fleet arrived in Maui, the canoes were so numerous, the shores between the boundaries of Hāna and Ko‘olau were completely filled with canoes.

> Also at the place called the surf of Keanini as far as Pueokahi it was choked with the canoes of the Hawaii people, and so it was off Mokuhano and Naniuakane and Kaihalulu. At Aleamai, Haneoo and Hamoa, these places were completely filled with canoes. At Honokalani and at Honomaele and Ulaino, the boundaries of Hana and Koolau, the canoes were thick. The last of the canoes landed on further at Opikoula, Nahiku, Waiohue, Wailuaiki and Wailuanui in Koolau.
>
> When Hoolaemakua saw the numbers of canoes and men, he and his men prepared to fight the men of Hawaii when the Hawaii warriors arranged themselves on the plain of Kuakaha. [Sterling 1998:122]

### 4.1.4 Battle of Kapalipilo

Kalani‘ōpu‘u and his forces invaded Maui, taking the districts of Hāna and Kipahulu and the Kau‘iki Hill. Ka‘uiki Hill is also referred to as the “fort of Kau‘iki.” Ka‘uiki Hill is a “natural fort and people on it are general safe from assault, being protected on all sides by steep and inaccessible cliffs (Sterling 1998:135).” Several battles were fought, however, Kamehamehanui and the Maui forces attempted and failed to reclaim Ka‘uiki Hill.

> Suddenly, therefore, he [Kalaniopuu] concentrated his forces and war-canoes at Kohala, and, without previous rupture of peace or declaration of war, he invaded Maui, where Kamehamehanui then ruled as Moi, and made a descent in the Hana district. Little or no resistance was offered, and in a short time he possessed himself of the two valuable districts of Hana and Kipahulu, as well as the celebrated fort on Kauwiki Hill overlooking the harbour of Hana. The date of this invasion is approximately, and probably correctly, fixed at 1759.
>
> But Kamehamehanui, though taken by surprise by the invasion of East Maui by Kalaniopuu, was not a man to yield to such a usurpation and affront without an effort to recover the lost districts .... With these forces Kamehamehanui set out for Hana and laid siege to the fort on Kauwiki. Several battles were fought with the Hawaii army under Puna, especially at Makaolehua and at Akiala, where the Maui

> forces were victorious, and in which the valour of Kaohelelani is greatly extolled. The fort of Kauwiki, however, withstood all attempts to take it, and, after a prolonged and unsucessful [sic] siege, Kamehamehanui withdrew his forces, and left Hana in possession of Kalaniopuu, while Puna remained as its governor and chief; and it does not appear that Kamehamehanui again attempted to drive the Hawaiians out of Hana. In the native legends this campaign is called the war of "Kapalipilo". [Fornander 1880, 2:146-147]

This period also saw the arrival of the first European explorer, Captain James Cook, on his pan-pacific voyage. This occurrence would inevitably lead to the arrival of even more European explorers, merchant vessels, and missionary passengers across all Hawaiian Islands, including Maui. The interactions between Hawaiians and these newly arrived visitors would come to mark the reshaping of traditional land use patterns in Hawai‘i toward the islands we see today.

### 4.1.5 European Explorers

In 1778, when Captain James Cook's ships returned from their North American explorations, they stopped at Hāna and encountered Hawaiians for the first time on board the decks of their ships. This came just before the well-known incident that cost Captain James Cook his life on Hawai‘i Island when he attempted to kidnap Kalani‘ōpu‘u for use as ransom (Cordy 2000:294).

In *Exalted Sits the Chief*, Ross Cordy (2000:294) places Kalani‘ōpu‘u at this first point of contact between Hawai‘i and the West:

> Kalani‘ōpu‘u had regrouped and again invaded Maui ca. 1778-pillaging Kaupō and Kaho‘olawe…and raiding and engaging Kahekili's forces in Ko‘olau and Hāmākualoa. It was during this campaign when Captain Cook arrived off Maui's Hāmākualoa in November 1778. Kalani‘ōpu‘u went on board briefly, wearing a helmet with yellow and black feathers and a long feathered cloak. (Cordy 2000:294)

Kalani‘ōpu‘u and Kamehameha I (then, in the war company of Kalani‘ōpu‘u) both visited Cook's ships, indicating who controlled the East Maui region.

In December 1788, William Douglas, commanding the British ship, *The Iphigenia*, arrived at Hāna and continued to sail on to the island of Hawai‘i where he presented Kamehameha with a swivel cannon. This cannon was mounted on a large double canoe, together with a number of muskets and a quantity of ammunition. In his account of Maui from aboard *The Iphigenia*, Meares (1791:335-336) wrote the following passage:

> We had no longer appeared off Mowee than a great number of canoes came off with hogs, yams and plantains.-On this side of the island there is a large town, the residence of Titeeree, the sovereign of Mowee, who was at this time on a visit to Taheo, king of Atooi, in whose absence the government was left to the care of Harwallanee, brother-in-law to Tianna, of whose arrival he was no sooner informed, than he ordered a present of hogs to the ship; but before it arrived Tianna had observed his brother of shore, and having dressed himself in his best apparel, desired that message might be sent to invite him on board.-On his arrival they met as brothers should do after a long separation; the whole of their conduct to each other was affectionate; they melted into tears, and almost drew the same from the eyes of those who held them. After their first emotions had subsided, the chief

> requested Captain Douglas to remain with him for a few days, and engaged to supply him with any quantity of provisions that might be demanded; but as he saw no place where they could come to an anchor in safety, the surf at the same time beating with great violence, and an heavy swell with the wind blowing in shore, Captian Douglas was under the necessity of declining the invitation. [Meares 1791:335-336]

### 4.1.6 Disease in Remote Hāna

One of the earliest impacts of European contact on Native Hawaiians was the spread of Old World diseases into island populations. With the arrival of Captain Cook in the late 1770s came the initial introduction of venereal disease and possibly respiratory ailments (Kirch 2012:158). Kirch also suggests that venereal disease is often overlooked in disease impact studies since it does not usually kill its victim “although its effects on a population with no prior exposure may have been more severe than usual” (Kirch 2012:158). Resulting from the introduction of venereal disease, the birthrate very likely plummeted because of the severe effects of disease on women’s reproductive organs who have never been exposed to them. The number of rampant diseases was to increase steadily alongside the number of traders, merchants, and visitors arriving from distant shores. To this effect Kirch (2012:158) observes:

> Later ships brought even more virulent diseases: dysentery, measles, tuberculosis, smallpox, and leprosy. Before Cook the islands were free of all these old-world scourges; consequently, Hawaiian bodies did not have antibodies or resistance against them. As we now know, such ‘virgin soil’ epidemics can have devastating effects on indigenous populations. (Kirch 2012:158)

Although there is serious debate about the actual count of the Hawaiian population at first contact with Europeans, making an exact figure for the depopulation of Hawaiians by disease difficult to grasp, the known effects of the introduction of foreign disease make a population reduction from 500,000 in 1779 to 130,000 fifty years later seem feasible (Kirch 2012:158). Given the histories of European contact in other previously unexposed locations it is likely that morbidity can account for much of the decline. Though early mortality rates are sporadic at best and often inaccurate in their measurements, there is some evidence of the impact of disease in Hawai‘i in this early period.

Lack of demographics regarding salient mortality rates is best explained by logistical issues present in the developing nation of Hawai‘i in the early to mid-1800s. In *Historical Statistics of Hawaii*, Robert Schmitt (1977:40) explains that “statistics on deaths by cause of death are particularly lacking in long term comparability, not only because of serious under-registration in the early years but also because of major changes instituted from time to time in classification procedures.” The first statewide collection of mortality statistics associated to a cause of death did not occur until the early 1900s, and then the statistics were only in terms of individuals affected and were not tabulated according to either ethnic heritage or nationality. Regardless of this glossing of demography, the early records show tuberculosis being particularly ravaging in the beginning of the 20$^{th}$ century. The first half of the 1900s regularly shows over 1,000 active cases of tuberculosis with as many as 531 deaths annually (Schmitt 1977:80). Record keeping for infectious disease (barring those transmitted by intercourse) gained more coherence by the mid-1900s, demonstrating the most commonly reported disease afflictions across the archipelago were

leprosy, tuberculosis, gonorrhea, syphilis, chicken pox, influenza, measles, mumps, pertussis, shigella, and typhoid (Schmitt 1977:80-82).

From the early census data it becomes evident that one of the most alarming among the contagions was influenza, which in some years had death tolls well above 1,000 souls, with some years having as many as 6,677 (Schmitt 1977:82). Such observations were frequently reported in the local newspapers, such as with an article by J.S. Green (1857:1) in *The Pacific Commercial Advertiser*, where the author reported that "we have all been afflicted with the influenza, natives and foreign residents. Not a few of the aged and feeble among the people have died." Sporadic reports begin to appear with regular frequency in newspaper editorials after this, such as a 10 February article in the Daily Honolulu Press (1883:1):

> In the month of July of this year we had a visitation of Influenza. . . Very many among the foreign population were attacked, and it prevailed extensively among the natives, death not infrequently resulting with the latter, from disposing causes. Among these was John Young (Keoni Ana) the Minister of the Interior, aged only 47 [Daily Honolulu Press 1883:1]

Even with the high instance of mortality among Hawaiians, it should be noted that the person responsible for the census of the Kingdom in the mid-1800s, Richard Armstrong, thought the reported numbers were far too low. He believed that for every reported death two to three went unreported (Daws 1968:140). Flu was not the only concern in the Hawaiian Islands as made apparent by a newspaper advertisement in the 4 October 1892 *Evening Bulletin* announcing the closure of all Hawaiian Ports with the sole exception of Honolulu, due to Cholera outbreaks (Macfarlane 1892:2). Despite the remoteness and relative isolation of East Maui there was still sporadic reporting of disease afflictions affecting the population there.

Smallpox made an appearance in the early newspaper reports regarding disease among residents of East Maui. There is a November 1853 account of the first case of small pox in Hāmākua Loa from a passenger aboard the schooner *Sally* (The Polynesian 1853a:2). In a 24 December 1853 update of the account, the Commissioners of Public Health provide a description of how the disease arrived in the region as follows:

> The woman, as near as we could learn from herself and her husband, left the schooner on Friday evening, and staid over night not far from Kahului. The next day she made her way home: traveling, as we suppose through Hamakuapoko, Maliko and Kalanakahua, and reached her mother's house, at Haiku, on Saturday night. This was one of five or six houses built as close together as they could stand; and we think from 12 to 20 persons occupied these houses. Sabbath morning some 30 individuals passed within a few rods of the house, on their way to meeting. Once of us rode to the house and saw the woman. At 2 o'clock, P.M., he returned to the house, with the magistrate of the district, and found the woman's face covered with the small pox. She was ordered to be removed to the infected district, and the house was immediately destroyed, and the village deserted. No other case of the small pox have we had in Hamakualoa. [The Polynesian 1853b:2]

The following month, another update on small pox in East Maui is provided in the 21 January 1854 edition of Polynesian as follows:

> A correspondent on East Maui writes,-"I am happy to report the state of things on this part of the island, as prosperous. There have been from six to ten cases of small pox in Hamakua, and three deaths. No new case during the past six weeks. We can now report freedom from the small pox, if no new case should be introduced from abroad. There has been no case in Koolau, none in Kula, none in Honuaula, and but one or two in Wailuku. We hear that there are but few cases remaining in the districts of Hana, Kipahulu and Kaupo." [The Polynesian 1854]

These accounts may have been related to a Honolulu epidemic of smallpox in 1853 and 1854 (Daws 1968:139) and of its impacts to the neighbor islands. It was a large pan-Hawaiian problem of which the population was wholly unprepared. Daws (1968:140) relates the scene of devastation in the more populated cities:

> The Hawaiians had never given much attention to Western ideas about medical treatment, and in this instance they paid a terrible price…Hawaiians fell sick everywhere. Some were abandoned and died alone; their bodies were left to rot. Others were buried where they lay, without coffins, in graves so shallow that wandering pigs and dogs could unearth them. Some native families nursed their sick at home, devotedly and uselessly, and carefully laid the dead under the dirt floors of their thatch huts or in their house yards, following their old burial practices and condemning themselves to follow the dead into the grave. [Daws 1968:140]

Partly because of the cultural gulf that existed between the Hawaiian and Western cultures, many people who had neither the antibodies, or the knowledge, to combat European scourges passed away.

Although large epidemics were rare in the eastern districts of Maui, when they did arrive, they often had devastating effects. On 2 October 1869, a brief call to action was published in *The Pacific Commercial Advertiser* describing a deadly epidemic that was occurring in Honomanū and throughout the Island of Maui as follows:

> By a letter received yesterday from East Maui, we learn of the continued ravages of the epidemic fever which has prevailed for months on that Island. Rev S. Kamakahiki states, under date of the 23d, that since the 1st of September there have been fifteen deaths at Honomanu and seven at Keanae, and that a large number of the natives were sick. From another source we learn that the once numerous population of Honomanu valley has dwindled down to two or three families. In behalf of these dying natives, we ask the Board of Health if all has been done that can be done to save them and stay the ravages of the fever? If not, is not the Board censurable? [The Pacific Commercial Advertiser 1869b:3]

The ailment to blame for the 1869 outbreak was never explicitly named, but given the poor state of disease reporting in general in more populous areas it is unsurprising that only small attention was paid to this affliction from Honolulu newspapers. The testament of the reporter clearly shows that even something as common as fever could have terrible repercussions on isolated and non-immune communities. The precise impact of various diseases on the populations of East Maui is wanting in terms of public recordation, but it does call to mind the many reports of early island

wide archaeological studies (Stokes 1917; Thrum 1909b; Walker 1931) that report evidences of extensive habitation and agricultural features lying abandoned throughout East Maui.

## 4.2 Mid to Late 1800s

### 4.2.1 Missionaries

The Hāna region of Maui was known as “one of the most isolated places in these islands, remote and difficult to access” (Bishop 1861). Because of the many treacherous ravines and unpredictable flooding, Native Hawaiians usually rode on horseback to a point before Ke‘anae, then completed the journey to Hāna by canoe. Before the establishment of the Hāna protestant mission in 1837, missionaries reached East Maui no more than once or twice a year. From the early writings of the protestant missionaries in the Sandwich Islands, it appears that the first excursion to Hāna by an American protestant teacher was made in 1823. In regards to this, Richards and Stewart (1825:141) in *The Missionary Herald* write:

> …A similar adventure is related by Honorii [Native assistant to the missionaries], in a late visit to the eastern part of the island of Mowee, whither he went in the company of Keoua, wife of Governor Adams. That part of the island [Hāna] had never been visited by missionaries, and Honorii took occasion to preach to them Jesus Christ. He found them wholly uninstructed, and exceedingly attached to their idols, and disposed to resist every argument in favor of a change in their religion. Before he left the place, he ascended a neighboring hill which overhangs the sea on the top of which were several huge stones erected, covered with tapa (native cloth), and dignified with the appellation of gods. With the aid of some of his company, he succeeded in displacing them from their beds, and rolled them into the sea. [Richards and Stewart 1825:141]

The Protestant mission station of Hāna was administered in its early days by the Reverend Mark Ives and his wife, Mary Ann Brainerd Ives. The Ives were protestant missionaries who had both arrived from New England in 1836 (Judd et al. 1969:122). The Ives were joined by the Reverend Daniel Toll Conde and his wife Mrs. Andelucia Lee Conde, who were stationed in Hāna following their arrival in 1838 (Judd et al. 1969:72). The isolated missionary station of Hāna was serviced by the 39 ton schooner *Missionary Packet* which had been built in 1825 at Salem, Massachusetts, for use between the Hawaiian Islands, as well as other schooners and steamships (Mifflin 1983:19).

### 4.2.2 Catholic Missionaries and the Pa‘akaula of 1843

Protestant missionaries, having a strong presence in Hawai‘i by the early 1800s, had almost exclusive claims to managing the salvation of its inhabitants, but the Catholic Church was soon to follow its protestant fellows to Maui’s shores. Catholic missionaries had found a favorable foothold with a few courtiers of Kamehameha III just a year after he passed the Edict of Toleration in 1839. This Edict allowed religious freedom for all inhabitants of the Kingdom of Hawai‘i. Six years later, the first Catholic missionaries arrived in the busy whaling town of Lahaina and found themselves amid a population receptive to their teachings, despite the fact that many of the *ali‘i*, the protestant missionaries, and the Queen Regent Ka‘ahumanu were outwardly opposed to their presence on Maui (Speakman 1978:87-88). The earliest Maui converts to the recently arrived faith were two brothers, Helio and Petero Kaoeloa from Wailuku (Schoofs 1978:291). The next

generation of catechist converts were soon to follow, especially Helio Kaiwiloa who passionately converted from the fold of the Protestant Church into Catholicism. Helio Kaiwiloa had left East Maui to be officially baptized, shortly before returning to Maui to travel the East Maui districts preaching the Roman Catholic faith (Speakman 1978:87-88).

Helio Kaiwiloa's influence was significant during his lifetime spent preaching in remote East Maui. Robert Schoofs (1978:257) in his *Pioneers of the Faith* describes Helio:

> Kaiwiloa assiduously studied his Christian doctrine and shared his knowledge with others. Going from house to house in Kahikinui he was not a little surprised to find many catechumens. He gathered them in a little chapel, where they said their prayers together and took part in the instructions. Kaiwiloa covered several adjacent villages, displaying great zeal in propagating the faith. [Schoofs 1978:257]

The increase in the number of catechumens acquired by Catholics in the Hāna district became a point of concern for Protestant missionaries, and in 1843 they prevailed upon Judge Mahune of Wailuku to send policemen to investigate the activities of Catholics and catechumen, arrest them, and transport them to Wailuku to stand trial. The charges were simple, that Kaiwiloa had gathered the catechumen once weekly in his private home for the purpose of practicing communal prayer. Perhaps perceived as a type of conspiracy, it was deemed unlawful and ordered to be stopped (Schoofs 1978:260).

Eventually, the Wailuku police made it to remote East Maui to begin the arrests. In one of the first villages they reached they arrested a half-dozen Catholics and moved onto the next village, gathering a few more of the faithful at every stop along the long road back to Wailuku (Schoofs 1978:260). All along the way additional arrests were tied together to manage the ever increasing crowd of offenders, this is why the procession was named the *pa‘akaula* (sometimes *pakaula*), or the "tying, binding with ropes" (Speakman 1978:88). Schoofs (1978:260) then relates the impressive display of solidarity that followed:

> The catechumen of Maui had agreed on the following line of conduct. If any Catholic or catechumen were arrested for any crime other than for his religion, nobody would take an interest in the case. But if, however, anyone were arrested for religion's sake, all would declare their solidarity and voluntarily join the arrested one.
>
> This is precisely what was done. Going eastward, the ever increasing band passed through Kaupo and Kipahulu, and continued the journey along the north coast of the island until they reached Wailuku. A striking feature of this procession was that the prisoners were dressed in their Sunday best and were wearing gay floral wreathes. [Schoofs 1978:260]

This large display crossed every major *moku* on their way into Wailuku to stand trial, allowing the procession to preach as they travelled through Hāna, Nāhiku, Ke‘anae, Kailua, Ha‘ikū, and Pā‘ia (Speakman 1978:87). The entire distance travelled by the officers and their prisoners covered close to 90 miles of difficult terrain over the course of a month. There were also periodic rests along the way which afforded the persecuted Catholics time to speak with the inhabitants at their brief respites and proselytize, gathering more catechumen into their fold as they proceeded (Schoofs 1978:260).

By the time that the procession had reached Wailuku for their trial the crowd was too massive for the courts to handle. Seeing the size of the crowd containing the Catholics and their sympathizers, Judge Mahune bid all the participants to “go home” and dismissed the charges against the Catholics (Schoofs 1978:260). Helio and his catechumen had prevailed against the persecution perpetrated by Protestant influences entrenched in Maui. An unexpected benefit of this persecution was that the number of catechumen on Maui had nearly tripled during the ordeal, bringing the count near a thousand adherents. The faithful Catholics then walked the long road back to their homes lead by Helio Kaiwiloa, spreading their faith along the way (Speakman 1978:88). Although religious ideas were developing at a rapid pace in the Hawaiian Islands after European contact, another major change was simultaneously taking place surrounding the relationship of Native Hawaiians to the land they inhabited for generations immemorial, The Māhele.

### 4.2.3 The Māhele and the Kuleana Act

In 1845, the Board of Commissioners to Quiet Land Titles, also called the Land Commission, was established “for the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any landed property” (Chinen 1958:8). This led to the Māhele, the division of lands among the king of Hawai‘i, the *ali‘i*, and the common people, which introduced the concept of private property into Hawaiian society. In 1848, Kamehameha III divided the land into four divisions: Crown Lands reserved for himself and the royal house; Government Lands set aside to generate revenue for the government; Konohiki Lands claimed by *ali‘i* and their *konohiki* (supervisors); and *kuleana,* habitation and agricultural plots claimed by the common people (Chinen 1958:8–15).

Upon confirmation of a land claim, the *ali‘i* were required to pay a commutation fee to the government. This commutation (meaning a substitution of one form of payment or charge for another) could be satisfied with a cash payment or the return of land of equal value. This payment was usually one-third of the value of the unimproved land at the date of the award (Chinen 1958:9–12). The *ali‘i* usually retained some of the land they were awarded and then returned some of the land to pay the commutation fee. The returned land usually became Government Land. In 1851, Government Lands became available for purchase “in lots of from one to fifty acres in fee simple, to residents only, at a minimum price of fifty cents per acre” (U.S. Department of the Interior 1882:23). These costs did not include the survey fee, which was to be paid by the interested buyer.

Under the Kuleana Act of 1850, the *maka‘āinana* were required to file their claims with the Land Commission within a specified time period in order to apply for fee-simple title to their lands. The claim could only be filed after the claimant arranged and paid for a survey, and two witnesses testified that they knew the claimant and the boundaries of the land, knew that the claimant had lived on the land since 1839, and knew that no one had challenged the claim. Then, the *maka‘āinana* could present their claims to the Land Commission to receive their Land Commission Award (Kame‘eleihiwa 1992).

Not everyone who was eligible to apply for *kuleana* lands did so and not all of the claims were awarded. Some claimants failed to follow through and come before the Land Commission, some did not produce two witnesses, and some did not get their land surveyed. In addition, some *maka‘āinana* may have been reluctant to claim *‘āina* that had been traditionally controlled by their *ali‘i*, some may have not been familiar with the concept of private land ownership, and some may

have not known about the Māhele, the process of making claims (which required a survey), or the strict deadline for making claims. Further, the Land Commission was comprised largely of foreign missionaries, so the small number of claimants and awards may reflect only those *maka‘āinana* who were in good standing with the church. Significantly, the surveying of land was not standardized (Kame‘eleihiwa 1992:296–297).

There are four LCAs in the vicinity of the project area with one, LCA 387:5, that the project area overlaps. Four Grants, Grant 634:2, 883, 634:3, and 650, are also in the vicinity of the project area and the project area overlaps Grants 634:2 and 634:3 (Figure 5, Figure 6).

Table 1. LCAs and Grants within the vicinity of the project area

| Award # | Type | Claimant |
|---|---|---|
| 0615 | LCA | Mose Ulunahele |
| 634:2 | Grant | Gerrit P. Judd |
| 419:2 | LCA | Kawainui |
| 419:1 | LCA | Kawainui |
| 883 | Grant | Gerrit P. Judd |
| 387:5 | LCA | ABCFM |
| 650 | Grant | Maui |
| 634:3 | Grant | Gerrit P. Judd |

The foundation for private land ownership set by the Māhele of 1848 began a very marked pace of development across the entire archipelago, and Maui was no exception to the age of Western development that was about to dawn across the island. The Māhele enabled many foreigners and foreign nationals to acquire land for the establishment of ranching and plantation operations, including the infrastructure projects that were aimed at supporting these land-intensive industries (aqueducts, roads, etc.). All of this was happening alongside civic development in the more populated areas as the Hawaiian economy grew, a growth funded in part by the government land sales to foreigners. Additionally, many foreign nationals who relocated to Maui to work were enabled to acquire their own homestead lands, and thus establish themselves and future generations on the island, increasing the ethnic and cultural diversity of Maui. Though these changes would signify a new period of economic growth for the Kingdom of Hawai‘i as a whole, the pace of development would continue to impact the social and environmental landscape of East Maui.

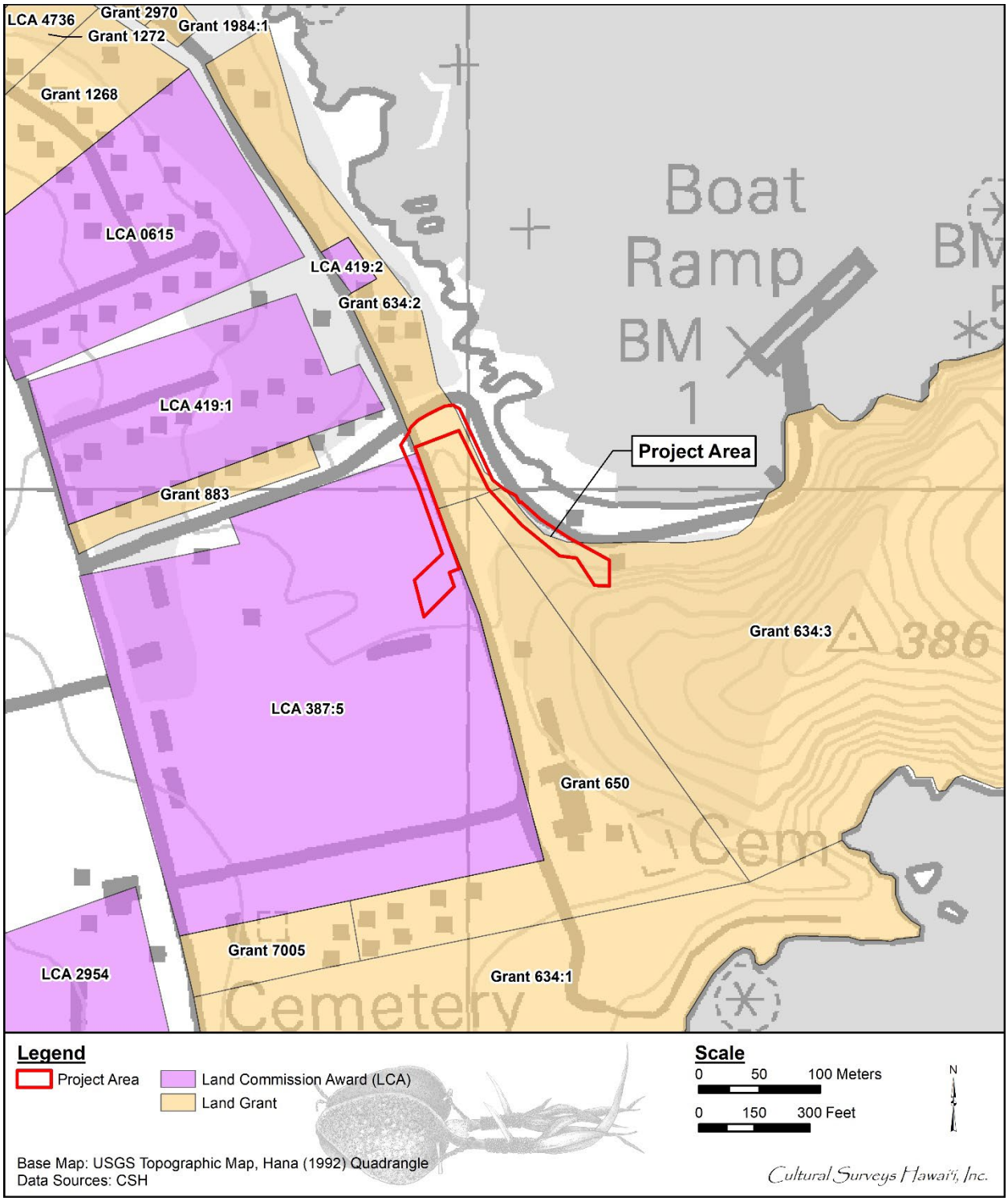


Figure 5. Portion of the 1992 Hana USGS 7.5-minute topographic quadrangle showing Land Commission Awards and Grants in the vicinity of the project area

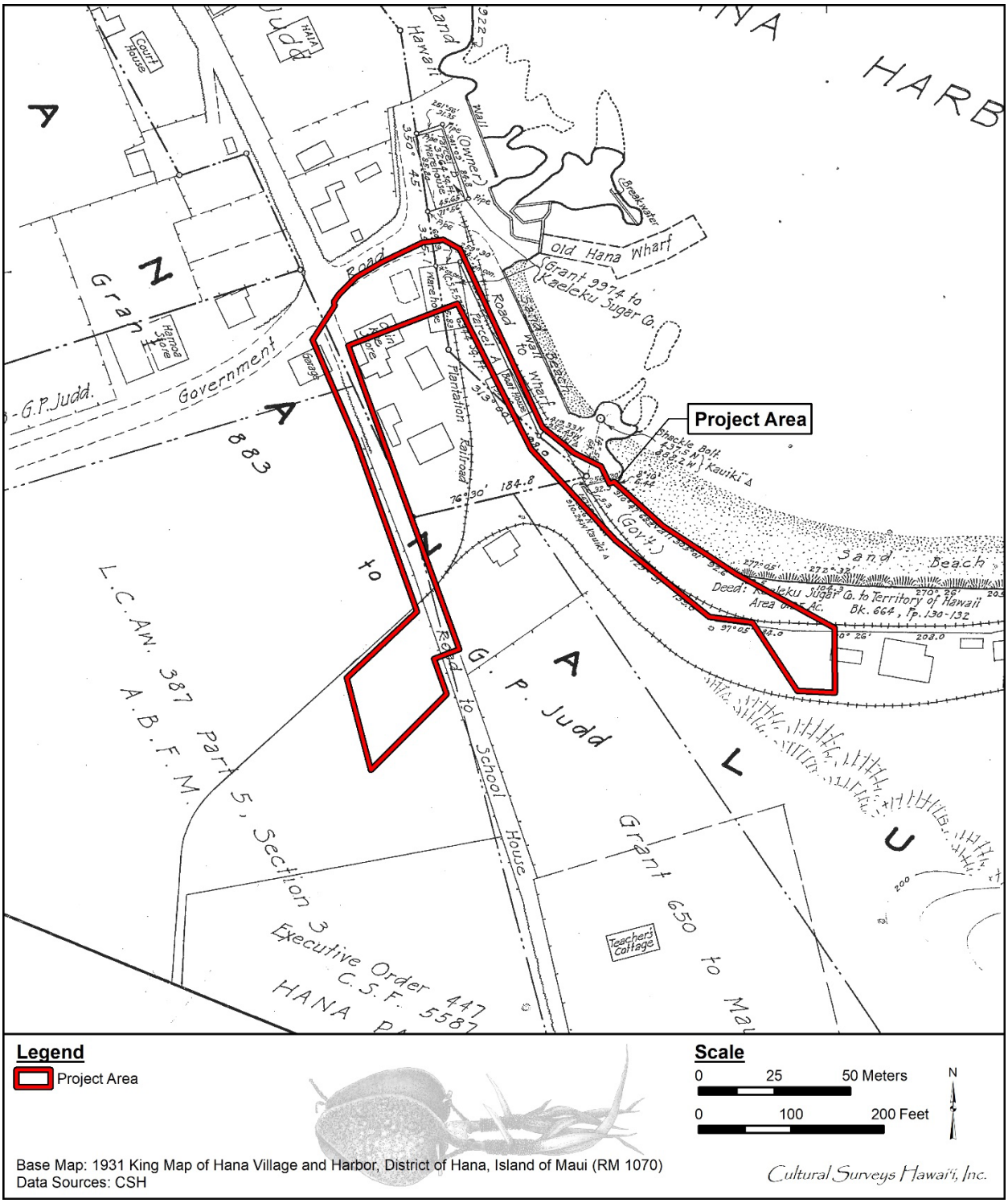


Figure 6. 1931 King Map of Hāna Village and Harbor with project area delineated

### 4.2.4 Commercial Enterprise in Hana

A 2 February 1897 article in *The Hawaiian Star* discusses the future of the Hāna region from the perspective of the continued growth of industry and commerce in Hawai‘i at the turn of the century (The Hawaiian Star 1897). Hāna and the undeveloped slopes of East Maui are described as one of the last natural environments remaining in the State in the following excerpts:

> The district of Hana is one of the least known to the general public of any districts on the Islands. Beyond the fact that there are three sugar plantations, viz: Hana, Reciprocity and Kipahulu, the average citizen of Honolulu knows very little about it. It is one of the districts that, like Kona and Puna, will one of these days awake out of sleep.
>
> The prospects of the Hana district are good. The sugar plantations lie on the belt of the undulating land at the extreme east of the Island. To the northwest of Hana Plantation there is an extent of country stretching for twelve or fourteen miles, which, at one time, supported a large population, but which at present time has only a scattered villages here and there.
>
> The energy to develop these lands must come from without, it can never come from within. Again, it is not only energy and capital that are required, but roads. The roads of the portion of the Hana district have hardly been touched since the days of Dr. Judd, who, so far as memory serves, had the present so-called road constructed. [The Hawaiian Star 1897:4]

The ambition for successful commercial cultivation in East Maui continued to be the focus of all endeavors throughout the mid- and late-1800s. Sugar, coffee, and rubber plantations were started throughout the region with high hopes of success (Figure 7). A 19 December 1898 article in *The Hawaiian Star* documents a large land sale in Nāhiku and describes the beginning of “the awakening” of the region to foreign industry in the following excerpts:

> The land sale which took place at Paia on Saturday afternoon, December 17th, was indeed a phenomenal one. There were three lots for sale, and each of them sold for a little over five times the appraised price.
>
> The lands in question are situated in Nahiku among the Palis of East Maui. A couple years ago it would have been hard to give the land away and no one wanted it, unless the chances of permanent government and therefore capital were assured. So the land lay a waste of guava scrub, ferns, ohia, kukui, lauhala and so forth. The thundering waterfalls crashed over the cliffs and the streams roared over their rocky beds to the ocean, with no tribute to the soil in the shape of irrigation. For miles there would be no habitation.
>
> Now all this is being changed. The district, one of the most fertile on the Islands, awakes out of its lethargy. The valleys which have only heard the roar of the cataract and the rush of the stream will wake to the sound of the steam whistle and the ax, and man will enter upon his kingdom. Cultivation and civilization with reign, but the wild beauty of the Koolau district with be gone. Again this is progress under annexation. [The Hawaiian Star 1898]

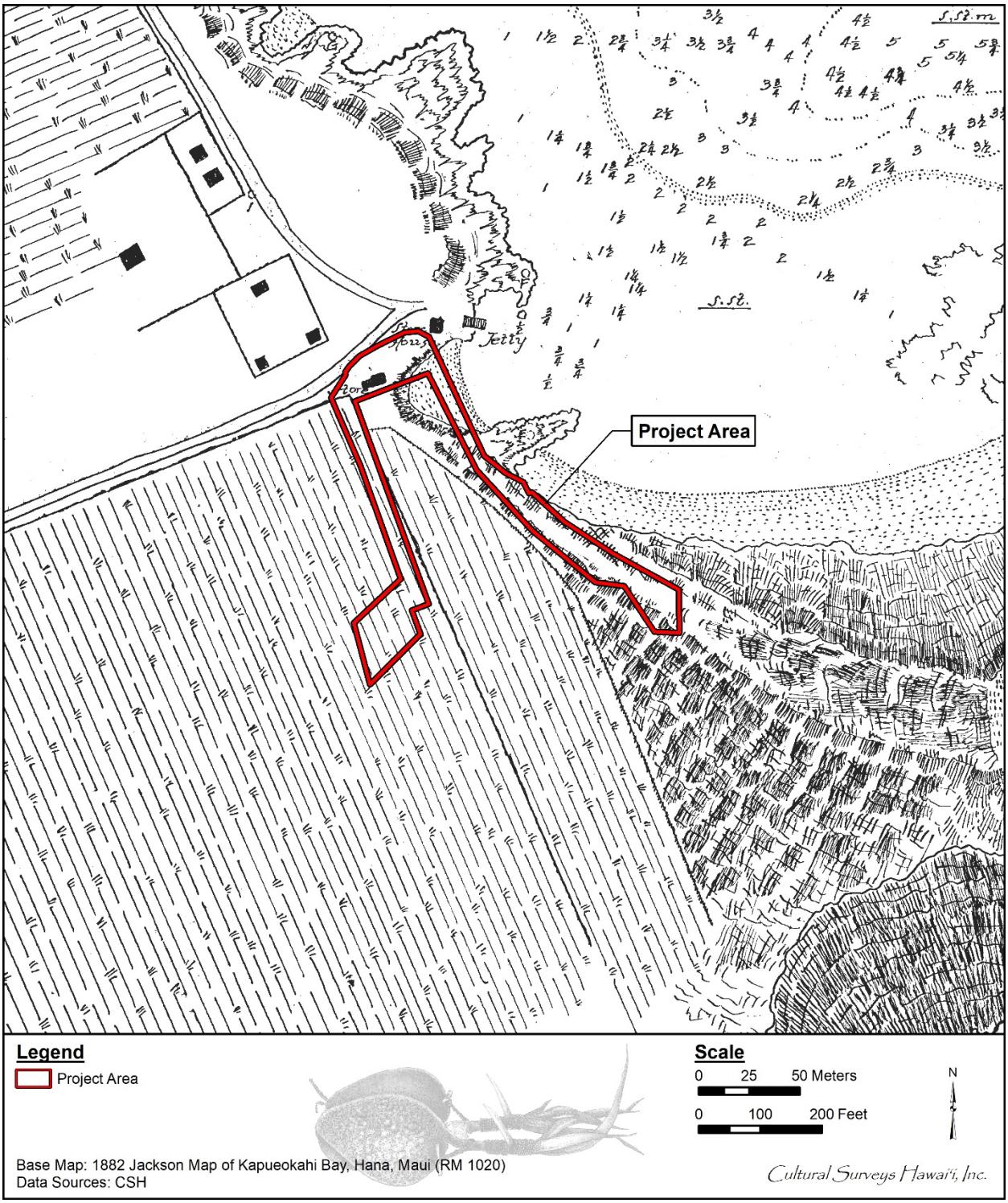


Figure 7. 1882 Jackson Map of Kapueokahi Bay with project area delineated

## 4.3 1900s to Present

According to the Census Bulletin of 1900, the population of Hāna District was reported to be 5,276 and the population of Makawao District was reported as 7,236 (Thrum 1909a:18). The Board of Health reported 755 births and 422 deaths in Maui County in the year 1900 (Schmitt 1977:13). An interesting population dynamic of this period of time is that while the populations of the Wailuku and Makawao districts continued to grow by at least a thousand inhabitants every ten years, there is a corresponding negative effect on the population of Hāna. Official census figures have the Hāna population shifting from 5,276 persons in 1900 to only 969 persons in 1970 (Schmitt 1977:13-14). While disease and urban drift may play a role in these figures, there is also the added regional strain of the establishment, and subsequent collapse, of agricultural industries throughout the East Maui region. While East Maui was originally slotted for agrarian development in the eyes of the early developers, this industry would, during the course of the twentieth century, gradually give way to tourism as its primary draw to visitors and businessmen.

A feature section in the 4 September 1910 edition of the Honolulu Advertiser documents an August 1910 tour through the Hāna District of Maui by H.M. Ayres, a reporter for the paper (The Honolulu Advertiser 1910:13). The tour, which began on the government road and then continued along the Koolau Ditch trail, provides a first-hand account of the region, albeit from an outsider's perspective, along with photographs of homesteads, homesteaders, landscapes, and prominent structures. While passing through Honomanū Gulch, Ayers relates "…there is none more impressive in the islands. Its beauty baffles description and were its attractions name widely known, tourists in plenty would assuredly visit…" (The Honolulu Advertiser 1910:13). Continuing along the ditch trail to Ke‘anae, Ayers stopped at the house of Halemano and recounts the following observations of life in Ke‘anae:

> At the house of Halemano we were made very welcome, supper being ordered by our host at a Chinese restaurant nearby. He naively remarked that poi and fish were no good for haoles. Halemano, who is postmaster and political boss of the precinct, is a dignified old native. His house is on the campaign circuit and when election time rolls round there are stirring times at his residence. His daughter, Aunie, is easily the belle of the district.
>
> Many of the Keanae girls have Chinese husbands and appear to be quite happy with them. They are better providers than the Hawaiians and this probably accounts for the phenomena.
>
> Before leaving Keanae we offered to buy a squid stone from Halemano but the old man refused to part with the relic, declaring that it was his wife's and that he didn't need the money-a rare thing with the average Hawaiian today.
>
> While we were in Keanae the natives were conspicuous by their absence. Returning for some article that I had forgotten, after my departure, I found quite a gathering discussing the business of the malihini haoles while across the rice fields men, women, and children were hastening toward the house of Halemano. [The Honolulu Advertiser 1910:13]

### 4.3.1 Jack London

In the summer months of 1907, renowned travel writer Jack London and his second wife Charmian, stopped at Maui on the South Pacific portion of their sailing trip around the world to travel the ditch trail across the Hāna District. His horseback travels around Haleakalā and overland to Hāna appeared in his book "The Cruise of the Snark," a non-fiction account of London's travels and experiences during their world tour that was published in 1911. In select excerpts from London's book reprinted in *The Honolulu Advertiser* (1914:10) the beautifully rugged East Maui coast is described as follows:

> The windward side of Haleakala is serried by a thousand precipitous gorges, down which rush many torrents, each torrent of which achieves a score of cascades and waterfalls before it reaches the sea. More rain comes down here than in any other region in the world… Hundreds of inches of rain annually, on fertile soil, under a tropic sun, means a steaming jungle of vegetation. A man, on foot, cutting his way through, might advance a mile a day, but at the end of a week he would be a wreck, and he would have to crawl hastily back if he wanted to get out before the vegetation overran the passage way he had cut. [Jack London in The Honolulu Advertiser 1914:10]

London also observed the lay of the land near the Ko‘olau Gap in Haleakalā Crater, travelling into Hāna, Ke‘anae, and eventually Nāhiku. As a keen observer and seasoned writer, London took notice of the abundance of water flowing from the local watersheds. London also inspected the rubber plantation at Nāhiku and traveled by way of the Nāhiku Ditch Trail, of which he commented:

> Water means sugar, and sugar is the backbone of the Territory of Hawaii, wherefore the Nahiku Ditch, which is not a ditch, but a chain of tunnels. The water travels underground appearing only at intervals to leap a gorge, travelling high into the air on a giddy flume and plunging into and through the opposing mountain. This magnificent waterway is called a "ditch," and with equal appropriateness can Cleopatra's Barge be called a box-car… There are no carriage roads through the ditch country, and before the ditch was built, or bored, rather, there was no horse-trail…O'Shaughnessy was the daring engineer who conquered the jungle and the gorges, ran the ditch and made the horse-trail. He built enduringly, in concrete and masonry, and made one of the most remarkable water-farms in the world. Every little runlet and dribble is harvested and conveyed by subterranean channels to the main ditch. But so heavily does it rain at times that countless spillways let the surplus escape to the sea. [Jack London in The Honolulu Advertiser 1914:10]

London's visit to East Maui could not have been better timed and his observations more appropriate considering the ongoing development of agricultural endeavors in the Hāna District. Surely his descriptions of the local watersheds, his experiences in plantation communities, and the feats of engineering that connected them would reach many readers abroad by way of his penmanship. Even the impressive engineering feats London witnessed in this environment could not detract from the wildness of the surrounding countryside he observed:

> The vegetation ran riot over that wild land. There were forests of koa and kolea trees, and candlenut trees… Wild bananas grew everywhere, clinging to the sides of the gorges, and, overborne by their great bunches of ripe fruit, falling across the trail and blocking the way. And over the forest surged a sea of green life, the climbers of a thousand varieties, some that floated airily, in lacelike filaments, from the tallest branches; others that coiled and wound about the tree like huge serpents; and the one, the ie-ie, that was for all the world like a climbing palm, swinging on a thick stem from branch to branch and tree to tree and throttling the supports whereby it climbed… In fact, the ditch country is nothing more nor less than a huge conservatory. Every familiar variety of fern flourishes, and more varieties that are unfamiliar, from the tiniest maidenhair to the gross and voracious staghorn, the latter the terror of the woodsmen, interlacing with itself in tangled masses five or six feet deep and covering acres. [Jack London in The Honolulu Advertiser 1914:10]

### 4.3.2 Sugar Industry in Hāna

Sugar was an indigenous crop, but small-scale commercial harvesting of the crop began in the mid-1800s (Maclennan 1995:97). Hāna was one of the earliest locales to become involved in commercial cane operations in “1849 or 1850, when a Mr. Lindgren cultivated 60 acres of cane and ground it with a mill erected in a grass shack” (Condé and Best 1973:247). This grass shack mill was reported to be in the Haneo‘o Hāmoa flats *makai* of the Hāna Highway. In 1861, Mr. August Unna gained control of these and other sugar plantation lands and began two decades of land consolidation and improvements including construction of the plantation railroad (Condé and Best 1973:248). During this early period of commercialization, small farmers apparently raised cane crops within LCAs and grants, and then sold the cane to the mills. By the end of the century, Hana Plantation had taken over large tracts of land and smaller farmers disappeared, as did most of the remains associated with this era (Condé and Best 1973:247–250).

The Hana Plantation continued to mechanize throughout the early 1900s when Theo H. Davies and Company assumed ownership from Grinbaum. The plantation name changed to Ka‘eleki‘i Sugar Co. with the Theo H. Davies acquisition, and it was at this time that the virtual disappearance of former features took place (Condé and Best 1973:247–250). The use of natural bedrock outcrops, ledges, gulch edges and lava flow edges to pile excess rocks is an observable pattern of past land utilization, especially of the commercial sugar cane era. Some of these rock piles or “waste areas” were designated as archaeological sites (Borthwick et al. 1992:16).

In 1933, the ownership of the plantation changed to C. Brewer & Company. By 1945, the plantation closed and was liquidated (Condé and Best 1973:250). In 1946, Paul Fagan, previous owner of Pu‘u o Hoku Ranch on Moloka‘i as well as Maunawili Ranch on O‘ahu, purchased 14,000 acres of Hana Plantation. Mr. Fagan converted the plantation to a cattle ranch and began Hotel Hāna Maui the same year. The conversion from sugar to pasture lands was done for the most part by the cattle themselves, who were put in the abandoned cane fields to graze, thus destroying the cane (Hāna Ranch, n.d.)

### 4.3.3 Hāna Highway Historic District

The paving of the Hāna Highway in 1962 increased tourist visitation in the project area vicinity (Figure 8, Figure 9, Figure 10). Afterwards, infrastructure and development projects in the 1970s through the present shaped the current landscape (Smith and Eadington 1992:128). The catalyst for development in Hāna is described in Tourism Alternatives: Potentials and Problems in the Development of Tourism by Valene L. Smith and William R. Eadington:

> In the early 1980s, after battles with the community over its plans to expand and upgrade its facilities, the Hana Ranch Company sold its holdings to the Rosewood Corporation, which was owned by the Caroline Hunt Trust Estate. The corporation is active in oil, gas, venture capital, real estate, and tourism. With the initial $20 million purchase price, the corporation bought the 4,500-acre Hana Ranch, Hana Water Resources, Hana Water Company, Hana Maui Transport Company, Hana Land Company, Hana Pacific, Inc., Zen at Hana Ranch (horticulture), Hana Ranch Ltd., and Hana Stockers Company. The present operation employs close to 400 people out of a total estimated population of 2,000. [Smith and Eadington 1992: 128]

The Hāna Highway Historic District, which extends from Hoalua Bridge near Huelo in the Makawao District to Koukouai Bridge in the Kīpahulu District, includes 78 contributing feature components dating to over 50 years old. The Hāna Highway was also recognized as a Millennium Legacy Trail in 2000, and in 2001 was nominated to the National Register of Historic Places (NRHP). A total of 73 contributing resources of the Hāna Highway Historic District were documented within the district’s NRHP registration form (Duensing 2001). A Historic American Engineering Record (HAER) No. HI-75 for the Hāna Belt Road was published by the National Park Service in 2005 to provide descriptions of the historic architectural and engineering features of the Hāna Historic District (Duensing 2005). Of the 78 component features of the Historic District approximately 56 of the bridges/culverts exist between Hāna and the central isthmus of Maui along the north shore of the island.

The general path of the road is much older than the existing historic highway. It has predecessors as early as the time of the Maui King Pi‘ilani’s Alaloa (“long road”) and Kihapi‘ilani’s addition to the Alaloa known as “The Kings Trail” in the 1600s, to the time of the “Ditch Trail” that ran alongside the early water catchment and diversion ditches for agriculture in the early 1900s. The Hāna Highway was first built with the intent to circumscribe East Maui with a levelled road surface in 1900, complete with gulch spanning bridges. The initial roadwork of the early 20$^{th}$ century was piecemeal and incremental at best, sometimes making use of horse and foot trails connecting otherwise isolated sections of road (Duensing 2005).

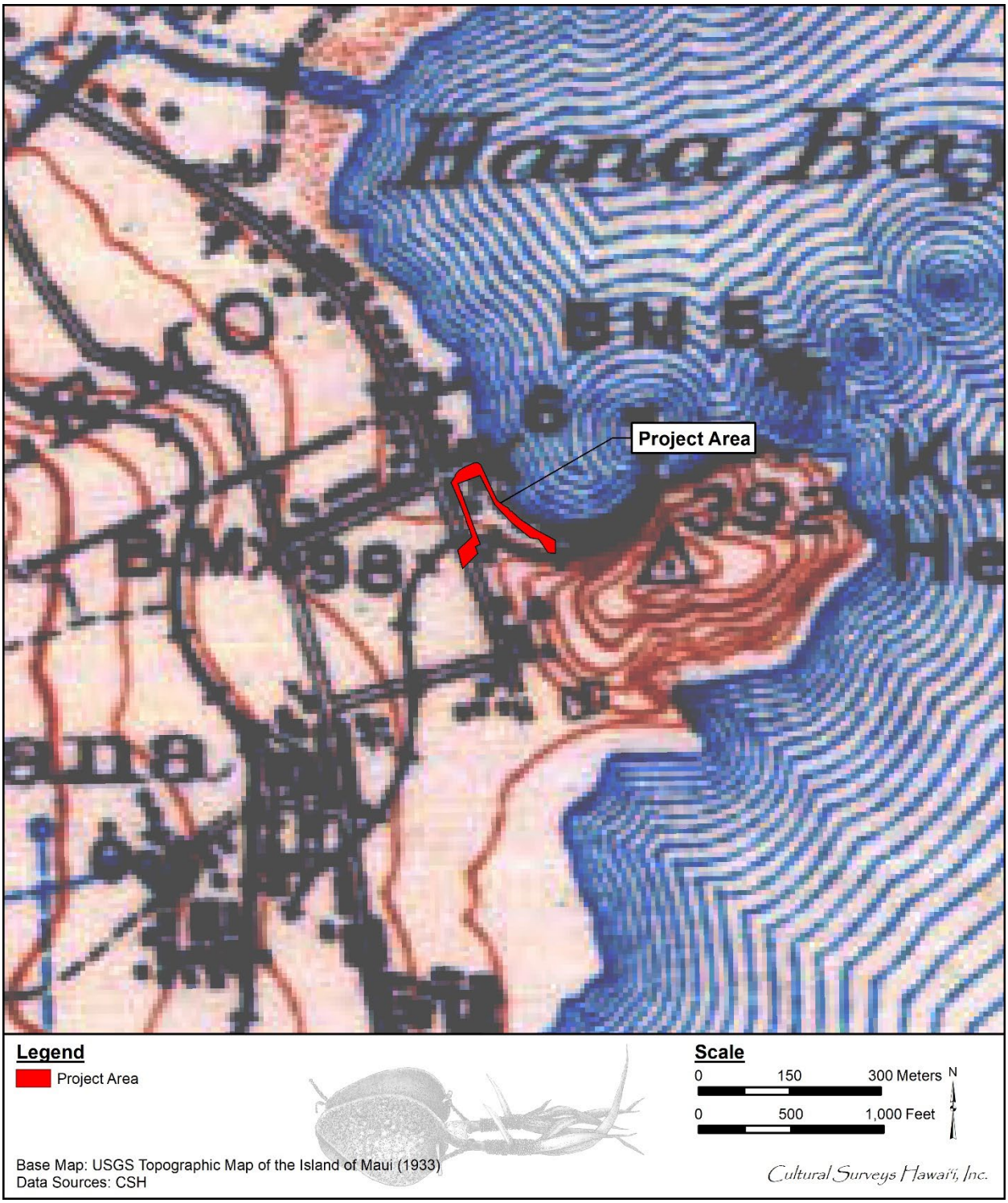


Figure 8. 1933 USGS Topographic Map of the Island of Maui with proect area delineated

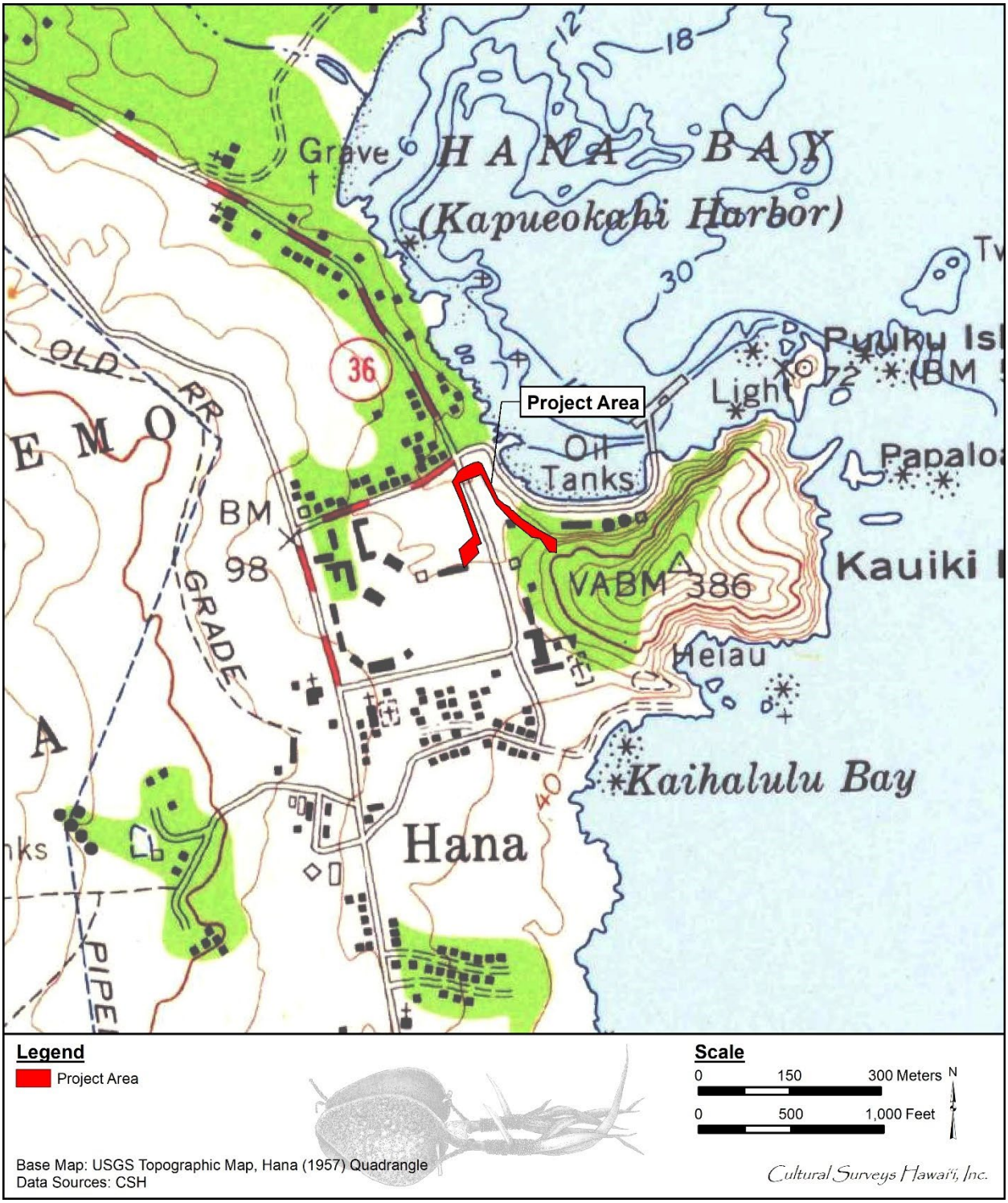


Figure 9.1957 Hana Quadrangle USGS Topographic Map with project area delineated

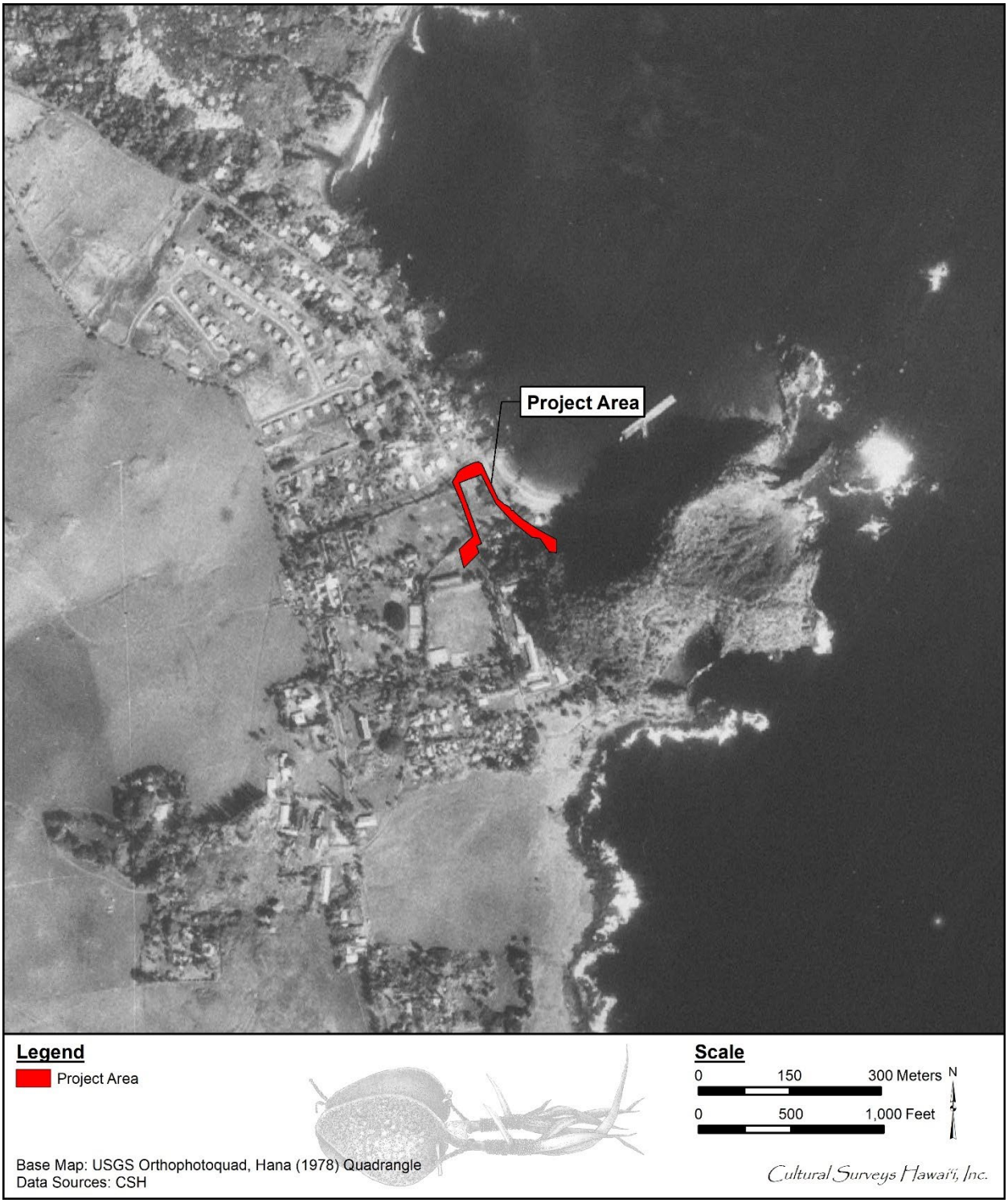


Figure 10. 1978 Hana Quadrangle USGS Orthophotoquad with project area delineated

Dawn E. Duensing in Hāna Belt Road HAER HI-75 (2005:29) describes the difficulty of working on the early road as follows:

> The work required in the Hana District was quite extensive due to the heavy rainstorms and freshets. At times flooding during the winter rainy season made it impossible to travel on the Hana Road…mail carriers were unable to complete their rounds, so the SPW [Superintendent of Public Works] ordered foot bridges built over deep gulches. Travelers were stuck with difficult overland travel on horseback or by steamers, which used what one resident called the "most impractical landings." [Duensing 2005:29]

Many of these problems were alleviated with the passing of the County Act of 1905 that established county government throughout the State of Hawai‘i, an important function of which was to appoint a county engineer by the name of Hugh Howell to oversee civic projects like the Hāna Belt Road. Replacement of the bridges was of utmost importance to the Hāna Belt Road project since "many of the [existing] bridges had deteriorated from rot and had trusses that were considered dangerous" (Duensing 2005:30). Howell's program of replacing the truss type bridges with concrete pier-type bridges was first implemented across ‘Ohe‘o Gulch amounting to a 70 foot span. Although construction of these new type of bridge foundations were expensive, Howell argued that it represented an economic reconstruction since concrete piers required less maintenance than the trusses, which reduced necessary maintenance cost from an estimated $50 per year to $5 per year. Part of these savings in maintenance also originated in Howells use of crude oil and carbolineum to help protect the wooden superstructure against the moist tropical air and environment (Duensing 2005). Construction of the road was slow for several years as the existing funding for the project was extremely limited and insufficient, having originated at that time from small amounts of money parceled out yearly by the government for the completion of consecutive sections of the road. This financial difficulty combined with the physical difficulty of building the road had the project approximately 10 years behind schedule by 1909. The formation of the Maui Loan Fund Commission (MLFC) in 1911 enabled the project to move forward with a more permanent capital improvement by replacing all timber bridges with concrete. The formation of the MLFC and the regularity of funding it provided enabled the construction of the first several concrete bridges enumerated among the Hāna Highway Historic District. The bridges constructed during the initial implementation of this funding were those named: Waikomai, Kōlea, Honomanū, Nua‘ailua, Mo‘omonui, Waiakoi, Pa‘ihi, South Wailua (Honolewa), and Koukou‘ai (Duensing 2005).

By 1920, the project saw the completion of many additional concrete bridges to the belt road, however, the belt road itself was far from complete as it still did not connect at several points. Also during 1920, the MLFC decided that it would suspend funding for the Hāna Belt Road for a few years to allocate funds to roads nearer the central isthmus that were seasonally inhibiting pineapple harvests due to poor conditions. The suspension of the belt road project would last until 1923 when Maui's business and civic leaders, along with the Hawai‘i governor Wallace Farrington, became proponents of a resurgence of civic interest in the project. This revitalized interest fueled a massive organized effort to complete the section of the road from Kailua to Ke‘anae, which was completed by its projected finish date in 1925 (Duensing 2005).

The construction of the next section of the Hāna Belt Road was begun shortly after the completion of the Kailua to Ke‘anae section, and was boosted by a substantial bond from President Calvin Coolidge issued to the Territory of Hawai‘i that included $150,000 for completion of the proposed 3.5 mile stretch from Ke‘anae to Wailua Iki. This stretch would prove to be the most difficult portion of road to create due to the many serried ridges of hard volcanic stone that had to be blasted through, and because of the occasional slipping of steam shovels into deep gorges and mechanical issues associated with their employment in the process of rock breaking. Occasional flooding and landslides were also a discouraging element of constructing the belt road, having been responsible for several instances of burying the steam shovels under their downslope aftermath. The final stretch of road was completed with the construction of Wailuanui Bridge in 1926, which had itself been setback by a landslide that sent 600 bags of concrete needed for its construction coursing down the adjacent gulch and out to sea (Duensing 2005). The Hāna Belt Road was completed and opened to the public in 1926 and effectively ended Hāna District's centuries of geographic isolation from the rest of the island. Although the public had begun travelling the road, several bridges were operational but incomplete. All the original bridges that comprise the historic road were not completed until 1947, and the road itself lacked a complete pavement up until the 1960s (Duensing 2005).

The type of component structures of the Hāna Historic District consist mostly of bridges and culverts, including: masonry arch bridges, concrete bridges, concrete arch bridges, and stone and concrete culverts. Since the road had been scarcely maintained since the final paving of the surface in 1962, it had been ravaged by the passing of time, showing few contemporary improvements aside from the addition of guardrails and pavement patch on the road surface.

In the 1990s, the State of Hawai‘i responded to the need to repair the Hāna Belt Road and implemented a preservation plan for the entire length of state-owned road between Huelo and Hāna. The preservation plan called not for the preservation of the bridges themselves, but instead sought to retain the "character" of the road with its narrow bridges and winding cliffside roads. This proved to be a challenge as the funds offered by the Federal Highway Administration (FHWA) required the roads to be widened to their standard widths of 36 feet, with some of the existing roads only being about 16 feet wide. Ultimately the historic width of the bridges was allowed to remain narrow, conditional upon approval by the FHWA on a case by case basis. As a result of this ongoing maintenance work the historic district has been thoroughly researched and described in detail by multiple studies (Duensing 2001, 2005; McCurdy et al. 2014; MKE Associates LLC and Fung Associates 2013; Nagamine Okawa Engineers Inc. and Fung Associates 2015; Oceanit 2000; Wilson Okamoto & Associates 2001)

Ultimately, the Hāna Belt Road was deemed a historic property of significance due to the efforts and achievements surrounding its construction. Duensing (2005:55-56) clarifies the roads effect on the region:

> The Hana Belt Road was a substantial public works achievement…during an era when Maui, especially Hana, was quite isolated from the rest of the world… the Hana Belt Road also involved the expertise of highly trained engineers and designers…Although some of the construction work was contracted out, county employees did nearly all the design and engineering work. [Duensing 2005:55-56]

In that the Hāna Belt Road still serves its original function of connecting isolated Hāna to the central plains, and that it has undergone very little cosmetic changes in the ensuing 70 years since its construction, it has a preserved character and function that has changed very little since its construction. Although the Hāna Belt Road was constructed to more sufficiently connect and develop the remote eastern side of the island, the opposite effect has been documented because of the narrow winding nature of the historic highway. Duensing (2005:59) clearly illustrates this point as follows:

> The lack of easily-travelled, high-speed traffic artery has served to impede substantial development…There are no fast food chain restaurants, chain stores, strip malls or sprawling subdivisions along the Hana Belt Road. Travelers…are served by the occasional roadside stand and must drive all the way to Hana for limited conveniences such as groceries, gas, and restaurants. With a sizeable population of residents of Hawaiian ancestry, Hana is often cited as Maui's "most Hawaiian community". [Duensing 2005:59]

By way of reduced efficiency of travel to the Hāna region, a problem the Hāna Belt Road was originally constructed to rectify, the east side of the island has developed at a significantly slower pace than the vacation communities located on the southern and western shores of Maui. The novel architectural features of an early 20th century road combined with an awe inspiring slow drive through densely vegetated jungle and deep gulches have afforded the Hāna Belt Road a character uncommon in most civic projects of the early 20th century. This is the reason why the Hāna Belt Road was later deemed the Hāna Historic District and afforded protection on behalf of the United States Government and placed on the National Register of Historic Places in 2001 (Yucha and Hammatt 2017a).

### 4.3.4 Modern Land Use

Current land use patterns in Hāna, Maui reflect growing tourism and capital gains investment land tenure. In 2001, Meridian divided its assets, selling the hotel properties to Passport Resorts and the ranch properties (including 4,500 acres) to Hana Ranch Partners (HRP), a mainland investment group based in San Francisco and Montana. In 2009 Passport Resorts sold the hotel to Ohana Hotel (managed through Vermont based Arden Grove Hospitality. In 2010 the hotel was sold to Amstar (a Denver based real estate investment company) through its Denver based subsidiary Green Tea LLC which operates Travaasa Destinations group. Finally, in 2010, the Hotel Hana Maui was renamed Travaasa Hotel and since 2020 is now called Hana-Maui Resort.

In 2002 HRP sold 102 acres of coastal pasture land to Oprah Winfrey and Bob Green, and also converted 41 acres at Maka‘alae and 4 acres designated as Kakio I to conservation. In 2013 they sold the Hana Ranch facilities, including 3,600 acres of ranch land, and two water supply companies to Bio-Logical Capital of Colorado. In 2014 HRP converted an additional 10 acres at Kakio II to conservation (www.savehanacoast.org).

# Section 5 Previous Archaeological Research

The earliest archaeological studies on the island of Maui were a part of island-wide surveys conducted in the early 1900s (Stokes 1917; Walker 1931). These studies tended to focus on producing descriptive lists of large-scale architecture or traditional ceremonial *heiau* sites. Following the passage of the National Historic Preservation Act in 1966 and HRS §6E, which established the Historic Preservation Program in 1976, archaeological studies occurred on a more frequent basis.

Previous archaeological studies conducted in the immediate vicinity (approximately 600 m radius) of the project area includes archaeological reconnaissance surveys, archaeological literature reviews and field inspections (LRFI), archaeological inventory survey (AIS) investigations, and archaeological monitoring programs (Figure 11 and Table 2). Overall, previous archaeological research in the immediate vicinity of the project area document various historic properties, including *heiau*, a human burial, and historic refuse pits and artifact scatters (Figure 12).

### 5.1.1 Walker (1931)

In 1928 and 1929, Walker (1931) conducted surveys of *heiau* on Maui and recorded four *heiau* in the vicinity of the current project area. Three of the sites were documented on the Keanini Point peninsula near the current project area: Walker Site 0105 (SIHP # 50-50-13-00105), Kaniomoku Heiau, Walker Site 0111 (SIHP # 50-50-13-00111) Honuaula Heiau, and Walker Site 0112 (SIHP # -00112) Kuawalu Heiau. Walker Site 0108 (SIHP # -00108) is an Unnamed Heiau on Nānu‘alele Point. The *heiau* were described by Walker (1931) as follows:

Walker Site 0105, Kaniomoku Heiau

> Location: The cane lands above the road.
>
> Description: Kaniomoku is mentioned by Thrum as the place where Kaahumanu spent her childhood. Her birthplace was in a large cave on the side of Kauiki Hill on the bay. The heiau has been totally destroyed. (Walker 1931:181)

Walker Site 0108, Unnamed Heiau

> Name: Unknown
>
> Location: On Keanini Point beyond the factory, 100 feet from the shore.
>
> Description: A small heiau probably of the Kuula class. It is little more than a level spot in the lava, 30 x 35 feet. The front is toward the bay, and a line of stones marks the edge of a step terrace. On the east a natural rock ledge forms a wall, and there are indications of a small terrace below it. The back is formed by a platform 3 feet high, 10 feet wide, and 35 feet long. A large part of the interior of the heiau is occupied by a double platform whose edges do not coincide with the edge of the terrace. It is likely a burial platform. Large pieces of Aa make up the terrace with beach stones used for the divisions. Few pieces of coral seen. (Walker 1931:183)

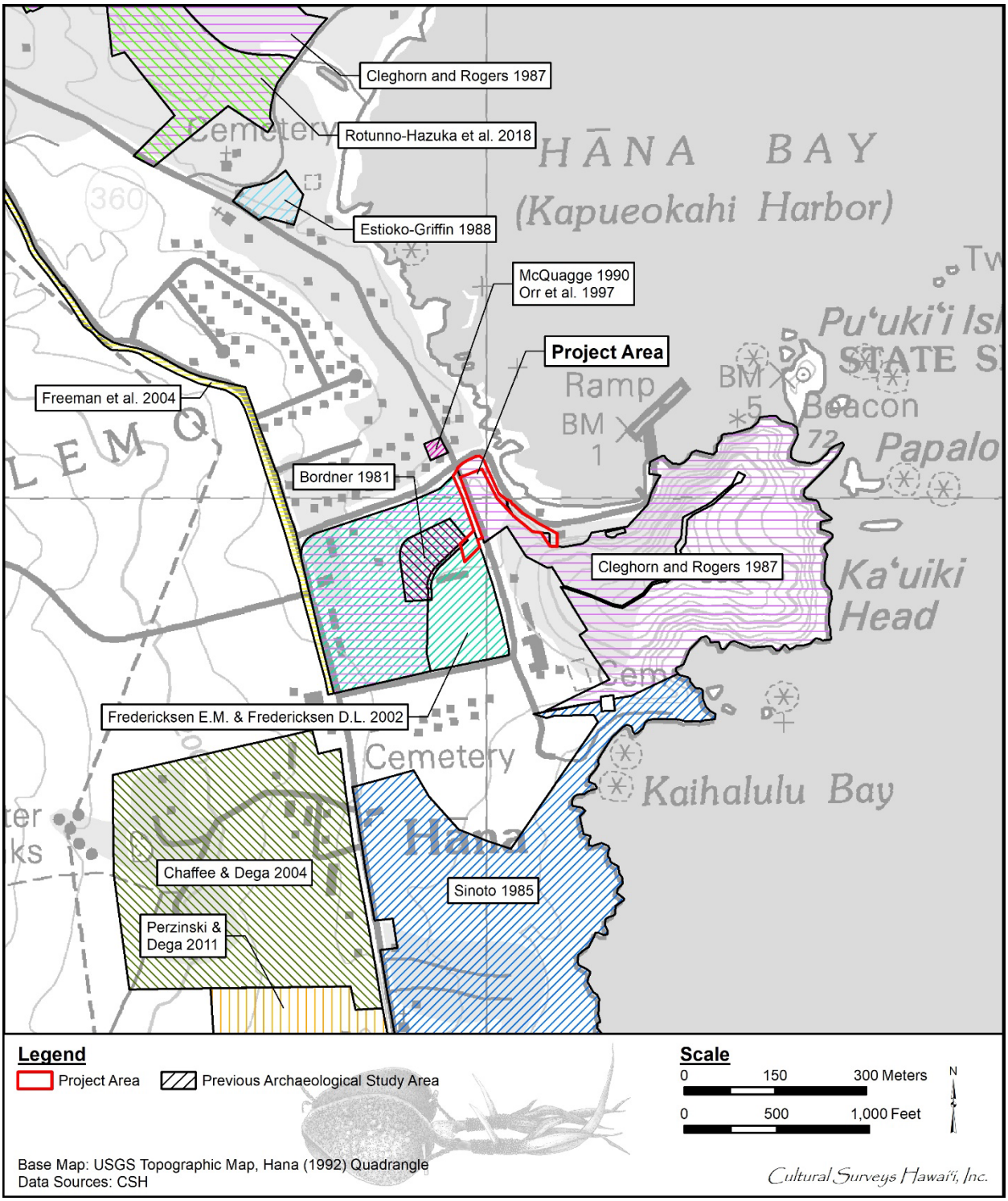


Figure 11. Previous archaeological studies in the vicinity of the project area (U.S. Geological Survey 1992)

Table 2. Previous archaeological studies in the vicinity of the project area

| Reference | Type of Study | Location | Results (SIHP # 50-50-13) |
|---|---|---|---|
| Bordner (1981) | Archaeological reconnaissance and subsurface testing | Hotel Hana; TMK: [2] 1-4-004-022 | No historic properties identified |
| Sinoto (1985) | Archaeological reconnaissance survey | Hāna Ranch; TMKs: [2] 1-4-003:003 and [2] 1-4-004:016 and 017 | No historic properties identified |
| Cleghorn and Rogers (1987) | Preliminary archaeological and historical investigation | Hāna ranch lands | Recorded 48 archaeological sites; approximately 20 sites destroyed due to sugarcane cultivation; remaining sites appear disturbed to varying extents |
| Estioko-Griffin (1988) | Field inspection | Hāna Agricultural Park (Kalo Road), Kaeleku, Hana; TMKs: [2] 1-3-009:020, 021 | Inspected the entrance of a known lava tube (SIHP # -01813), but deemed unsafe to investigate the bottom |
| McQuagge (1990) | Archaeological subsurface testing | Hāna, Maui; TMKs: [2] 1-4-013:014, 015 | Encountered midden and historic artifacts from a previous dwelling; no SIHP number assigned |
| Orr et al. (1997) | Archaeological subsurface testing | Parcel adjacent to the Hana Cultural Center; TMKs: [2] 1-4-013:014, 015 | No historic properties identified |
| Fredericksen and Fredericksen (2002) | Archaeological monitoring | Hāna Ballpark, Wananalua; TMK: [2] 1-4-004:021 | Documented SIHP # -05190, a recently disturbed human burial and traditional stone artifacts |
| Chaffee and Dega (2004) | AIS | Hāna Town Center, Wananalua; TMK: [2] 1-4-003:056 | Identified SIHP # -05546, historic refuse pit |
| Freeman et al. (2004) | Archaeological monitoring | Hāna Highway improvements, Huelo to Hana; TMKS: [2] 2-1-001, 002, 003, [2] 2-1-004:001-005, [2] 2-2-009:005, 006, 009, 010, 012, 013 | No historic properties identified |

| | | | |
|---|---|---|---|
| Perzinski and Dega (2011) | AIS | 10-acres in Hāna, Oloewa; TMK: [2] 1-4-003:009 (por.) | Identified SIHP # -06807, basalt cobble and boulder historic terrace |
| Rotunno-Hazuka et al. (2018) | AIS | 20-acre parcel, Kawaipapa; TMK: [2] 1-4-006:014 (por.) | Documented nine historic properties comprised of 70 possible features:<br>SIHP # -06069, a previously identified historic boundary wall;<br>SIHP # -07112, 13 features associated with historic to modern animal husbandry, agriculture, and habitation;<br>SIHP # -07113, historic boundary wall containing 11 features;<br>SIHP # -07114, 17 features associated with animal husbandry and agriculture;<br>SIHP # -07115, pre- to post-Contact multi-occupation site with seven features;<br>SIHP # -07116, possible historic to modern agricultural area with eight features;<br>SIHP # -07117, probable pre-Contact to historic habitation complex with seven features;<br>SIHP # -08316, pre-Contact to historic temporary habitation site with three features;<br>SIHP # -08317, a historic religious site with three features including a historic burial |

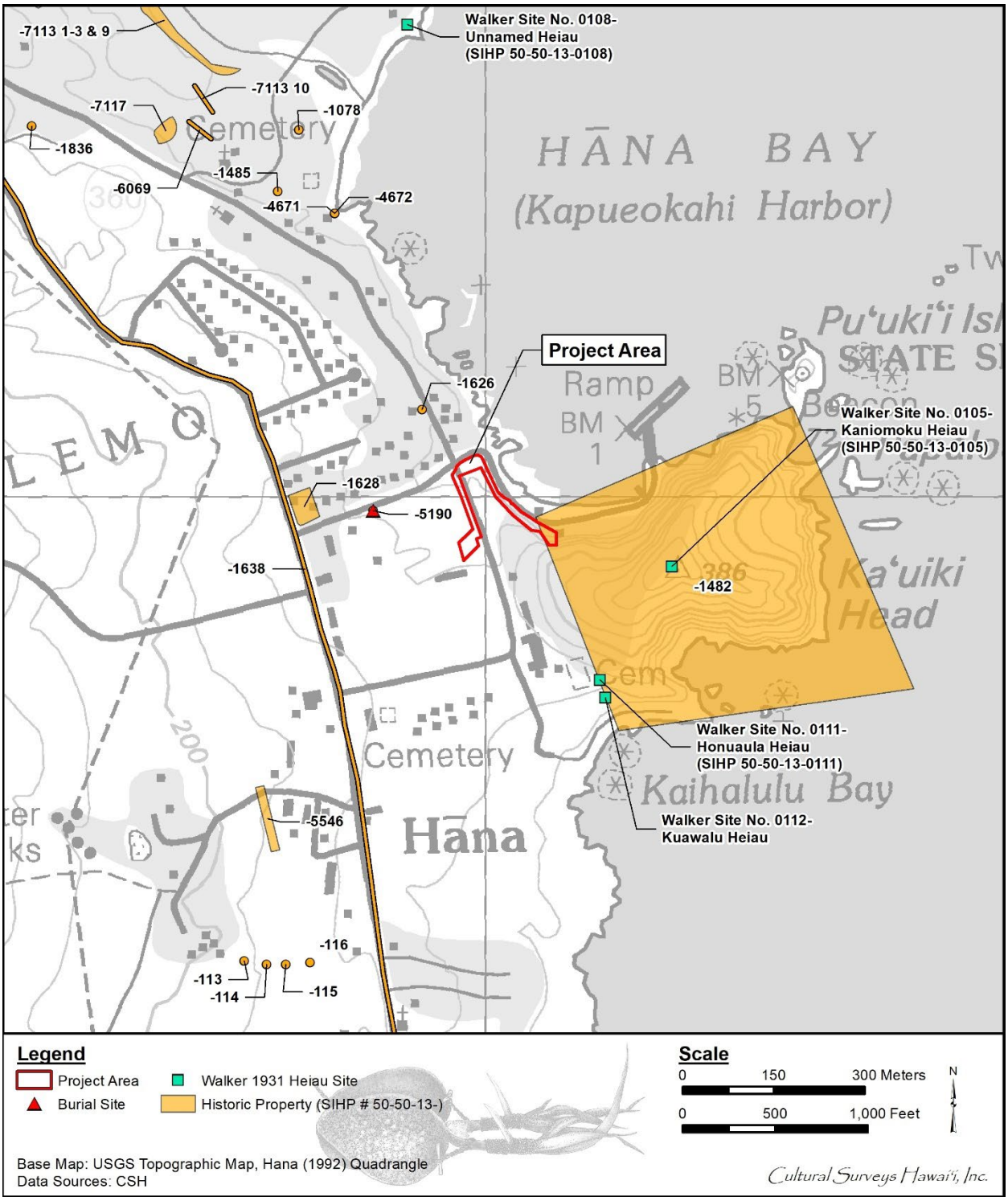


Figure 12. Previous identified historic properties in the immediate vicinity of the project area (U.S. Geological Survey 1992)

Walker Site 0111, Honuaula Heiau and Walker Site 0112 Kuawalu Heiau

Names: Honuaula, Kuawalu

Location: Base of Kauiki Hill

Description: Two war heiaus built by King Hua-a-Pohukaina of Lahaina sometime during the early part of the 12th Century. Thrum in his 1917 list speaks of Honuaula being built prior to the raid on Hawaii. On his successful return he built Kuawalu, said to have measured 70 x 120 feet. All traces of both are now destroyed. This is presumably the same King Hua that built the heiaus of Waiie and Luakona at Lahaina. He is referred to in legend as the infamous ruler who put his chief priest to death and himself died miserably of famine with all his people as a result. (Walker 1931:186)

### 5.1.2 Bordner (1981)

In 1981, Richard Bordner of Environmental Impact Study Corp. (EISC) conducted an archaeological reconnaissance survey with subsurface testing for a proposed expansion of the Hotel Hana-Maui (Bordner 1981). The study area was located immediately west of the southwestern portion of the current project area. Bordner (1981) documented that the area was in use as a miniature golf course and plant nursery. While the location and depth of the excavations are not provided in the report, subsurface testing in the study area documented a dark-stained clay layer with limited topsoil formation. No historic properties were identified. Bordner (1981) recommended no further work based on extensive recent land modifications for sugarcane cultivation and the golf course.

### 5.1.3 Sinoto (1985)

On 21 September 1985, the Bishop Museum conducted an archaeological reconnaissance survey of Hāna ranch lands (TMKs: [2] 1-4-003:003 and [2] 1-4-004:016 and 017) for the development of garden cottages on the property (Sinoto 1985). According to the Statewide Inventory of Historic Places (SIHP) compiled by the Department of Land and Natural Resources (DLNR), SIHP # 50-50-13-01482, Ka‘uiki Hill, is located directly northwest of the survey area. Due to the significance of the historic property, archaeologists conducted a survey to identify possible surface sites. No historic properties were identified.

### 5.1.4 Cleghorn and Rogers (1987)

In 1987, the Bernice Pauahi Bishop Museum (Cleghorn and Rogers 1987) conducted preliminary historical and archaeological investigations of Hāna Ranch lands within a portion of the current project area. The study reported that 48 archaeological sites have been recorded within the ranch lands, primarily *heiau* structures, but 20 have been destroyed likely because of sugarcane cultivation. Aerial images were referenced to locate and field reference of the 16 sites during the study, which were noted as having probably agricultural or habitation functions.

No archaeological sites were identified in the current project area. Among several general recommendations, the 1987 study recommended that all ranch lands be surveyed, all archaeological sites be recorded, and selected sites should be excavated to provide important information on site function and settlement chronology.

### 5.1.5 Estioko-Griffin (1988)

On 11 November 1988, DLNR conducted a field inspection of SIHP # 50-50-13-1813, a lava tube, in Kaeleku, Hāna (TMK: [2] 1-3-09:20 and 21) (Estioko-Griffin 1988). The landowner had requested the inspection and noted an interest in opening the cave to the public. The area had extensive previous disturbance from sugarcane cultivation. Entry into the bottom of the lava tube was deemed unsafe by the current means of a rope and hog-wire fencing tied to a tree. Besides litter and likely cow bones, no structures were visible at the bottom. The archaeologists recommended more detailed study of the interior prior to opening the cave to the public.

### 5.1.6 McQuagge (1990)

In 1990, Richard L. McQuagge conducted an archaeological investigation for the Hāna Cultural Center (HCC) traditional Hawaiian house replica construction (TMKs: [2] 1-4-013-014 and 015) (McQuagge 1990). A house had once stood in the eastern portion of the property. Nine test pits, each 1x1 m square, were hand excavated (Pit #s 1–9). Surface opihi and cowry middens, faunal remains, and historic artifacts were identified. Pit # 7 contained a rubbish pit, and the excavation area was expanded to further investigate the contents the limits. The rubbish pit contained a large majority of oriental artifacts such as rice bowls and medicine bottles. Pit # 8 contained a solid layer of intact glass bottles from the 1940s and 1950s. No historic properties were designated. Archaeological monitoring was recommended for future ground disturbance.

### 5.1.7 Orr et al. (1997)

From 24 June through 26 June 1995, CSH conducted an archaeological survey and testing of two parcels (TMKs: [2] 1-4-013:014 and 015) that adjoin the property of the HCC Museum (Orr et al. 1997). An amorphous rectangular stone mound located beneath a *ti* hedge was identified as possibly containing a burial, which was supported by testimony from a local resident. The HCC agreed to preserve and maintain the location. A total of four trenches (Trench 1, 3, 4, and 5) three shovel tests (Shovel Test 1–Shovel Test 3), and five test units (Test Unit 1–Test Unit 5) were excavated around the property. Post-WWII materials were recorded. No evidence of prehistoric Hawaiian occupation was encountered, and no historic properties were identified during subsurface testing.

### 5.1.8 Fredericksen and Fredericksen (2002)

In January and February 2002, Xamanek Researches conducted archaeological monitoring for lighting installation at the Hāna Ball Park following the discovery of a human burial (Fredericksen and Fredericksen 2002). The burial had been inadvertently disturbed during a lighting excavation in December 2001. The SHPD had been notified of the find and an archaeologist was contracted to fulfill an archaeological monitoring program. The burial was assessed as previously *in situ* and designated as SIHP # 50-50-13-05190. SIHP # -5190 was preserved in place beneath a concrete cap.

The study area is in the southwestern portion of the current project area. Project related ground disturbance included four light pole footing excavations and an electrical trench. Further monitoring of the excavations encountered several traditional and historic artifacts including a hammerstone, a hammerstone/chopper, and a pecking stone.

### 5.1.9 Chaffee and Dega (2004)

On 16 and 17 December 2003, Scientific Consultant Services, Inc. (SCS) conducted an AIS of approximately 37 acres for the Hāna Town Center (TMK: [2] 1-4-003:056) (Chaffee and Dega 2004). Seven backhoe trenches (ST-1 through 7) were conducted in two different locations within the project area. A historic-era refuse pit (SIHP # 50-50-13-05546) was present in Trenches 4 and 5. The contents primarily consisted of bottle glass. Archaeological monitoring was recommended.

### 5.1.10 Freeman et al. (2004)

From June 2004 through August 2004, CSH conducted archaeological monitoring in three locations for the Hāna Highway Improvements between Huelo, Makawao District and Hāna (TMKS: [2] 2-1-001, 002, 003, [2] 2-1-004:001-005, [2] 2-2-009:005, 006, 009, 010, 012, 013) (Freeman et al. 2004). Construction involved excavations of the roadway and gutters. Improvements have occurred at these locations on a continual basis due to rainfall erosion. No historic properties were identified.

### 5.1.11 Perzinski and Dega (2011)

On 21 October 2010, SCS conducted an AIS of approximately 10 acres in Hāna (TMK: [1] 1-3-004:009) for the construction of a senior housing project (Perzinski and Dega 2011). SIHP # 50-50-13-06807 was identified as a historic terrace constructed of basalt cobbles and boulders in the northwestern corner of the project area.

### 5.1.12 Rotunno-Hazuka et al. (2018)

In 2018, Archeological Services Hawaii, LLC. (ASH) conducted an AIS for an agriculturally zoned parcel on Kawaipapa (Rotunno-Hazuka et al. 2018). Nine historic properties with 70 possible component features were documented, including one previously identified historic property, SIHP # 50-50-13-06069, a historic boundary wall. Historic burials represented 2% of the total finds. The newly identified historic properties were assessed as follows:

1. SIHP # -07112, 13 features associated with historic to modern animal husbandry, agriculture, and habitation
2. SIHP # -07113, historic boundary wall containing 11 features
3. SIHP # -07114, 17 features associated with animal husbandry and agriculture
4. SIHP # -07115, pre- to post-Contact multi-occupation site with seven features
5. SIHP # -07116, possible historic to modern agricultural area with eight features
6. SIHP # -07117, probable pre-Contact to historic habitation complex with seven features
7. SIHP # -08316, pre-Contact to historic temporary habitation site with three features
8. SIHP # -08317, a historic religious site with three features including a historic burial

# Section 6 Community Consultation

## 6.1 Introduction

Throughout the course of this assessment, an effort was made to contact and consult with NHO, agencies, and community members including descendants of the area, in order to identify individuals with cultural expertise and/or knowledge of the *ahupua‘a* of Kawaipapa. CSH initiated its outreach effort in August 2021 through letters, emails, and/or telephone calls.

## 6.2 Community Contact Letter

Letters (Figure 13, Figure 14, Figure 15) along with a map and aerial photo were sent to individuals on the project‘s community contact list with the following text:

> With this letter, Cultural Surveys Hawai‘i (CSH) humbly requests your *mana‘o* and *‘ike* (experience, insights, and perspectives) regarding past and ongoing cultural, practices, beliefs, and resources within the Kawaipapa Ahupua‘a.
>
> Consultation with traditional cultural practitioners, *kūpuna*, *kama‘āina*, and Hawai‘i’s diverse ethnic communities is an important and deeply valued part of our work and the environmental review process for proposed projects in Hawai‘i. Your contributions will revitalize and keep alive knowledge of cultural practices, storied places, and life experiences that will remind Hawai‘i’s children of their history for generations to come.
>
> **Project Description**
>
> At the request of Munekiyo Hiraga and on behalf of The County of Maui, Department of Parks and Recreation, CSH is conducting a cultural impact assessment (CIA) for the Helene Hall Septic System Improvements Project in Hāna, Maui. The location and boundaries of the proposed project are delineated on a portion of the 1992 Hāna USGS topographic quadrangle (Figure 1) and a 2015 aerial photograph (Figure 2) attached to this invitation. The County of Maui (County), Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This causes the wastewater to back-up into the ATU system and requires staff to frequently (at least weekly) pump down the ATUs and cesspools. Due to these treatment and disposal deficiencies, the County, Wastewater Reclamation Division (WWRD), is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.

CULTURAL SURVEYS HAWAI'I
ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL DOCUMENTATION SERVICES - SINCE 1982

P.O. Box 1114 Kailua, Hawai'i 96734 Ph: (808) 262-9972 Fax: (808) 262-4950

*Aloha mai kākou Name of Recipient*,

With this letter, Cultural Surveys Hawai'i (CSH) humbly requests your *mana'o* and *'ike* (experience, insights, and perspectives) regarding past and ongoing cultural, practices, beliefs, and resources within the Kawaipapa Ahupua'a.

Consultation with traditional cultural practitioners, *kūpuna*, *kama'āina*, and Hawai'i's diverse ethnic communities is an important and deeply valued part of our work and the environmental review process for proposed projects in Hawai'i. Your contributions will revitalize and keep alive knowledge of cultural practices, storied places, and life experiences that will remind Hawai'i's children of their history for generations to come.

Project Description

At the request of Munekiyo Hiraga, and on behalf of The County of Maui, Department of Parks and Recreation, CSH is conducting a cultural impact assessment (CIA) for the Helene Hall Septic System Replacement Project. The location and boundaries of the proposed project are delineated on a map (Figure 1) (aerial photo) (Figure 2) (USGS map) attached to this invitation. The County of Maui (County), Department of Parks and Recreation (Parks) owns and operates two on-site aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall, in Hāna, Maui. The ATUs are currently not functioning as designed (aeration blowers are disconnected) and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This causes the wastewater to back-up into the ATU system and requires staff to frequently (at least weekly) pump down the ATUs and cesspools. Due to these treatment and disposal deficiencies, the County, Wastewater Reclamation Division (WWRD), is planning upgrades to the existing treatment system and to provide an alternative disposal option to replace the cesspools.

One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and aligned along Keawa Place (a State road) and Uakea Road (a County road). The force main will be 1-1/2" in diameter and buried within the existing roadway before reaching the Hāna Ball Park parking lot and the new treatment and disposal systems. The existing cesspools will be abandoned and closed.

The improvements are anticipated to improve system operability, reliability, and the quality of treated water. The proposed treatment train provides aerobic pretreatment, which will provide better $BOD_5$ removal and reduce the size of the new treatment unit at the ball park. This option also provides additional system redundancy that could be used in case the new treatment unit

Figure 13. Community Consultation Letter, Page one

**KAWAIPAPA 4 - CIA, Helene Hall Septic System Replacement Project**

**Page 2**

system is offline for maintenance or other unforeseen problems. Additional work includes the following:

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups
2. Add at-grade cleanouts to Helene Hall system to allow operators to more easily remove pipe clogs
3. Provide pretreatment at Helene Hall and construct new treatment unit at Hāna Ball Park parking lot
4. Construct an off-site traffic rated absoprtion field at Hāna Ball Park parking lot for effluent disposal

Purpose of this Study

The purpose of a CIA is to gather information on Hawai‘i’s cultural resources, practices, or beliefs that have occurred or still occur within the proposed project area and Kawaipapa Ahupua‘a. This is accomplished through consultation and background research using previously written documents, studies, and interviews. This information is used to assess potential impacts by the proposed project to the specific identified resources, practices, and beliefs in the project area and throughout Kawaipapa Ahupua‘a. As a traditional cultural practitioner and holder of long-term knowledge, your insight, input, and perspective provide a valuable contribution to the assessment of potential effects of this project and an understanding of how to protect these resources and practices.

Insights focused on the following topics in the project area (shown on the attached Figures 1 and 2) are especially helpful and appreciated:

- Your knowledge of traditional cultural practices of the past within the proposed project area and Kawaipapa Ahupua‘a
- Your specific traditional cultural practice and its connection to the proposed project area and Kawaipapa Ahupua‘a
- The different natural resources associated with your specific traditional cultural practice
- Legends, stories, or chants associated with your specific traditional cultural practices and their relationships to the proposed project area and Kawaipapa Ahupua‘a
- Referrals to other *kūpuna*, *kama‘āīna*, and traditional cultural practitioners knowledgeable about the proposed project area and Kawaipapa Ahupua‘a
- Your comments or thoughts on the potential impacts the proposed project may have on your ongoing traditional cultural practices and natural resources within the proposed project area and Kawaipapa Ahupua‘a
- Your knowledge of cultural sites and *wahi pana* (storied places) within the proposed project area and Kawaipapa Ahupua‘a
- Your comments or thoughts on the potential impacts the proposed project may have on cultural sites and *wahi pana* within the proposed project area and Kawaipapa Ahupua‘a

Figure 14. Community Consultation Letter, Page two

**KAWAIPAPA 4 - CIA, Helene Hall Septic System Replacement Project**

**Page 3**

Consultation Information

Consultation is an important and deeply valued part of the CIA and environmental review process. Your contributions will revitalize and keep alive our combined knowledge of past and ongoing cultural practices, historic places, and experiences, reminding our children of their history generation after generation.

With your agreement to participate in this study, your contributions will become part of the comprehensive understanding of traditions of the area, and part of the public record; they will be available for future access through the Office of Environmental Quality Control (https://health.hawaii.gov/oeqc/) and at the State Historic Preservation Division Library (https://dlnr.hawaii.gov/shpd/about/research-resources-library).

As a part of this process, your knowledge may be used to inform future CIAs and other heritage studies of cultural practices and resources that need protection from impacts of proposed future projects. If you engage in consultation, and the *mana‘o* and *‘ike* you provide appears in the study, we would like to recognize your contribution by including your name. If you prefer not to allow your name to be included, your information can be attributed to an anonymous source.

The consultation interview structure and format are flexible. We will accommodate your preference on how to get together; talk story, over the phone, by email correspondence, remotely via Zoom, MS Teams, Google Chat or other remote meeting platforms.

Your knowledge of the resources and potential effect of the project on traditional practices in the project area and Kawaipapa Ahupua‘a focusing on the topics in the bullet points above can also be submitted in a written statement. CSH will provide return postage of your written statement on request.

CSH is happy to provide a list of topics for discussion, a more structured questionnaire of interview questions, or any other assistance that might be helpful.

If you have questions regarding consultation, or are interested in participating in this study, please contact CSH Researcher Chantellee Spencer by email at cspencer@culturalsurveys.com or phone at 808-965-6478.

*Mahalo nui loa* for your time and attention to this request for consultation.

Yours with much aloha and appreciation,

Chantellee Konohia Spencer

*CSH Cultural Researcher*

Figure 15. Community Consultation Letter, Page three

One existing ATU will be rehabilitated with a new aeration blower and the other existing ATU will be repurposed as a solids settling and holding tank. A new wastewater pump station will be installed and the wastewater will be pumped uphill to a new treatment system and absorption field located at the Hāna Ball Park parking lot, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and aligned along Keawa Place (a State road) and Uakea Road (a County road). The force main will be 1-1/2” in diameter and buried within the existing roadway before reaching the Hāna Ball Park parking lot and the new treatment and disposal systems. The existing cesspools will be abandoned and closed.

The improvements are anticipated to improve system operability, reliability, and the quality of treated water. The proposed treatment train provides aerobic pretreatment, which will provide better $BOD_5$ removal and reduce the size of the new treatment unit at the ball park.

This option also provides additional system redundancy that could be used in case the new treatment unit system is offline for maintenance or other unforeseen problems. Additional work includes the following:

1. Modify the influent distribution box at Helene Hall to reduce pipe clogging and sewer backups
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4. Construct an offsite traffic rated absoprtion field at Hāna Ball Park parking lot for effluent disposal

**Purpose of this Study**

The purpose of a CIA is to gather information on Hawai‘i’s cultural resources, practices, or beliefs that have occurred or still occur within the proposed project area and Kawaipapa Ahupua‘a. This is accomplished through consultation and background research using previously written documents, studies, and interviews. This information is used to assess potential impacts by the proposed project to the specific identified resources, practices, and beliefs in the project area and throughout Kawaipapa Ahupua‘a. As a traditional cultural practitioner and holder of long-term knowledge, your insight, input, and perspective provide a valuable contribution to the assessment of potential effects of this project and an understanding of how to protect these resources and practices.

Insights focused on the following topics in the project area (shown on the attached Figures 1 and 2) are especially helpful and appreciated:

- Your knowledge of traditional cultural practices of the past within the proposed project area and Kawaipapa Ahupua‘a

- Your specific traditional cultural practice and its connection to the proposed project area and Kawaipapa Ahupua‘a
- The different natural resources associated with your specific traditional cultural practice
- Legends, stories, or chants associated with your specific traditional cultural practices and their relationships to the proposed project area and Kawaipapa Ahupua‘a
- Referrals to other *kūpuna*, *kama‘āīna*, and traditional cultural practitioners knowledgeable about the proposed project area and Kawaipapa Ahupua‘a
- Your comments or thoughts on the potential impacts the proposed project may have on your ongoing traditional cultural practices and natural resources within the proposed project area and Kawaipapa Ahupua‘a Your knowledge of cultural sites and *wahi pana* (storied places) within the proposed project area and Kawaipapa Ahupua‘a
- Your comments or thoughts on the potential impacts the proposed project may have on cultural sites and *wahi pana* within the proposed project area and Kawaipapa Ahupua‘a

**Consultation Information**

Consultation is an important and deeply valued part of the CIA and environmental review process. Your contributions will revitalize and keep alive our combined knowledge of past and ongoing cultural practices, historic places, and experiences, reminding our children of their history generation after generation.

With your agreement to participate in this study, your contributions will become part of the comprehensive understanding of traditions of the area, and part of the public record; they will be available for future access through the Office of Environmental Quality Control (https://health.hawaii.gov/oeqc/) and at the State Historic Preservation Division Library (https://dlnr.hawaii.gov/shpd/about/research-resources-library).

As a part of this process, your knowledge may be used to inform future CIAs and other heritage studies of cultural practices and resources that need protection from impacts of proposed future projects. If you engage in consultation, and the *mana‘o* and *‘ike* you provide appears in the study, we would like to recognize your contribution by including your name. If you prefer not to allow your name to be included, your information can be attributed to an anonymous source.

The consultation interview structure and format are flexible. We will accommodate your preference on how to get together; talk story, over the phone, by email correspondence, remotely via Zoom, MS Teams, Google Chat or other remote meeting platforms.

Your knowledge of the resources and potential effect of the project on traditional practices in the project area and Kawaipapa Ahupua‘a focusing on the topics in the

bullet points above can also be submitted in a written statement. CSH will provide return postage of your written statement on request.

CSH is happy to provide a list of topics for discussion, a more structured questionnaire of interview questions, or any other assistance that might be helpful.

If you have questions regarding consultation, or are interested in participating in this study, please contact CSH Cultural Researcher Chantellee Spencer by email at cspencer@culturalsurveys.com or phone at 808-965-6478.

In most cases, two or three attempts were made to contact individuals, organizations, and agencies. Community outreach letters were sent to 45 individuals or groups with few showing actual interest in participating.

## 6.3 Community Contact Table

Table 3 contains the names, affiliations, dates of contact, and comments from NHOs, individuals, organizations, and agencies that participated in the consultation process. Results are presented below in alphabetical order.

Table 3. Community Contact Table

| Name | Affiliation | Comments |
|---|---|---|
| Ahia, Jennifer Noelani | Malama Kakanilua | Letter and figures sent via email 23 July 2021 |
| Akoi, Sam | Aha Moku O Maui | Letter and figures sent via email 23 July 2021 |
| Apana, Clare | Cultural Practitioner; Malama Kakanilua; Aha Moku Council Burial Committee | Letter and figures sent via email 23 July 2021 |
| Buland, Holly | Museum Director, Alexander & Baldwin Sugar Museum | Letter and figures sent via email 23 July 2021<br>Ms. Buland replied same day saying they do not have information for that area.<br>Ms Buland recommended CSH contact Hāna Cultural Center<br>CSH replied same day with gratitude |
| Eaton, Antoinette “Toni” | Maui District Office Supervisor, Department of Hawaiian Home Lands | Letter and figures sent via USPS 27 July 2021 |
| Fisher, Scott | Chief Conservation Officer, Hawaiian Islands Land Trust (HILT) | Letter and figures sent via email 23 July 2021 |

| Name | Affiliation | Comments |
|---|---|---|
| Feiteira, Blossom | Executive Director of Friends of Moku‘ula | Letter and figures sent via email 23 July 2021 |
| Hāna Cultural Center | | Letter and figures sent via email 23 July 2021 |
| Hau, Skippy | *Kama‘āina*; Aquatic Biologist, DLNR Division of Aquatic Resources | Letter and figures sent via email 23 July 2021<br>Mr. Hau replied 26 July 2021 with the following:<br>*"My only comment is that the proposed are includes the fisherman's hale used to monitor the akule school in Hana Bay. Like many areas, the system needs to be improved to address the increased septic system needed by the community. I checked my photos but could not find a photo of the hale."*<br>CSH replied 27 July 2021 with gratitude and asked Mr. Hau if his brief testimony could be used in the CIA report. An authorization form was emailed to Mr. Hau.<br>Mr. Hau forwarded youtube links to CSH relating to Hāna. He also recommended CSH contact "Uncle Blonde Kaina".<br>CSH replied 28 July 2021 with gratitude. |
| Hew, Jason | Conservation Specialist, Maui County Soil and Water Conservation District | Letter and figures sent via email 23 July 2021 |
| Hobdy, Robert | Retired Naturalist and Forester | Letter and figures sent via email 23 July 2021 |
| Hokoana, Lui K. | President, Central Maui Hawaiian Civic Club; University of Hawai‘i Maui College's chancellor | Letter and figures sent via email 23 July 2021 |
| Holt-Padilla, Hokulani | *Kumu Hula*, Pā‘ū o Hi‘iaka/Director, Ka Hikina O Ka Lā, University of Hawaii Maui College | Letter and figures sent via email 26 July 2021<br>Ms. Holt replied 26 July 2021 with the following: |

| Name | Affiliation | Comments |
|---|---|---|
| | | *That area is not within my area of expertise. Any information I would have to offer can be found by researching in printed books and materials that are readily available.*<br>CSH replied 28 July 2021 with gratitude. |
| Kamekona, Carol Lee | Ahahui Kaahumanu - Wailuku | Letter and figures sent via USPS 28 July 2021<br>Address invalid, letter returned to sender |
| Kanahele, Daniel | Vice-Chair, Maui County Cultural Resources Commission | Letter and figures sent via USPS 28 July 2021 |
| Kapahulehua, Leonard Kimokeo | Founder, Kimokeo Foundation | Letter and figures sent via email 26 July 2021 |
| Kapu, Ke‘eaumoku | Chair, Aha Moku o Maui Inc. | Letter and figures sent via email 26 July 2021 |
| Kapu, Uilani | Treasurer, Na Aikane O Maui | Letter and figures sent via email 26 July 2021 |
| Kehler, Annalise | County Cultural Resource Planner | Letter and figures sent via email 26 July 2021 |
| Kekona, Thomas J. | *Kama‘āina* (Kailihou Ohana) | Letter and figures sent via USPS 28 July 2021 |
| Kamai, Sir David | Ali‘i ‘Aimoku, Royal Order of Kamehameha I, Chapter IV Heiau O Kahikili (Maui) | Letter and figures sent via USPS 28 July 2021 |
| Kubota, Gaylord | Retired Director/Founder, Alexander & Baldwin Sugar Museum | Letter and figures sent via USPS 28 July 2021 |
| Lake-Farm, Sissy | Executive Director, Maui Museum/ Kumu Hula, Nā Hanona Kūlike ‘o Pi‘ilani | Letter and figures sent via email 16 July 2021 |
| Mailou, Ipo | Hāna Community Association | Letter and figures sent via USPS 28 July 2021 |

| Name | Affiliation | Comments |
|---|---|---|
| Maluo-Pearson, Kahulu | Director of Operations, KA‘EHU | Letter and figures sent via email 26 July 2021 |
| Manuel, Kaleo M. | Former DHHL Planner<br>Deputy Director for Water Resource Management | Letter and figures sent via email 26 July 2021 |
| Molitau, Kapono‘ai | Owner, Native Intelligence | Letter and figures sent via email 26 July 2021 |
| Moore, Cheryl | Secretary, Waiohuli Undivided Interest Lessees Association<br>‘Āina Ho‘opulapula ‘O Waiohuli | Letter and figures sent via email 26 July 2021 |
| Nakahashi, Ikaika | Cultural Historian, SHPD | Letter and figures sent via email 26 July 2021<br>An automated reply was generated stating Mr. Nakahashi is working remotely.<br>CSH is on standby for correspondence. |
| Nakanelua, Kyle | Committee Member for Aha Moku O Maui | Letter and figures sent via email 26 July 2021 |
| Nakihei, Sarah | Maui Homestead Farmers and Ranchers Association | Letter and figures sent via email 26 July 2021 |
| Namau‘u, Kili | Director, Punana Leo O Maui | Letter and figures sent via USPS 28 July 2021 |
| Oliveira, Roy Kalani | President, Waiehu Kou Phase 3 Association | Letter and figures sent via email 27 July 2021 |
| Ornellas, Daniel L. | Vice President, Waiehu Kou Phase 3 Association | Letter and figures sent via email 27 July 2021 |
| Pang, Lorrin | Department of Health | Letter and figures sent via email 27 July 2021 |
| Pellegrino, Hokuao | Nohoana Farm Owner; Manager and Land Education Specialist for Kamehameha Schools Maui | Letter and figures sent via email 27 July 2021 |
| Phillips, Kealana | Burial Sites Specialist (Maui, Molokai, and Lanai) | Letter and figures sent via email 27 July 2021 |

| Name | Affiliation | Comments |
|---|---|---|
| Pua‘a, Mikiala and Kau | *Kama‘āina*, Kalo Farmer<br>Owner of Kapuna Farms | Letter and figures sent via USPS 28 July 2021 |
| Pyle, Bill | Former HC&S employee | Letter and figures sent via email 27 July 2021<br>Immediate reply, email address invalid |
| Raymond, Ki‘ope | Hawaiian Studies Teacher, University of Hawaii Maui College | Letter and figures sent via email 27 July 2021<br>Mr. Raymond replied the same day with no comments to the project. |
| Sherrill, Tamara | Executive Director, Maui Nui Botanical Gardens | Letter and figures sent via USPS 28 July 2021 |
| Shimaoka, Thelma | OHA, Community Outreach Coordinator | Letter and figures sent via email 27 July 2021 |
| Sousa, Keoki | President, Kahuna La‘au Lapa‘au o Maui | Letter and figures sent via USPS 28 July 2021<br>Address invalid, letter returned to sender |
| Watanabe, Noelani | Maui, Vice-Chair, Native Hawaiian Historic Preservation Council (NHHPC) | Letter and figures sent via email 27 July 2021 |

## 6.4 *Kama‘āina* Interviews

CSH did not receive usable results from community consultation. Efforts were made to schedule and speak with interested individuals but time and schedules did not allow the opportunity. It is important to note that although we did not receive usable feedback from the community, it does not mean they support, oppose, or are neutral in stance regarding the project. No response simply means no response.

### 6.4.1 Department of Land and Natural Resources, Commission on Water Resource Management

See Appendix A

# Section 7 Traditional Cultural Practices

Timothy R. Pauketat succinctly describes the importance of traditions, especially regarding the active manifestation of one's culture or aspects thereof. According to Pauketat,

> People have always had traditions, practiced traditions, resisted traditions, or created traditions […] Power, plurality, and human agency are all a part of how traditions come about. Traditions do not simply exist without people and their struggles involved every step of the way. [Pauketat 2001:1]

It is understood that traditional practices are developed within the group, in this case, within the Hawaiian culture. These traditions are meant to mark or represent aspects of Hawaiian culture that have been practiced since ancient times. As with most human constructs, traditions are evolving and prone to change resulting from multiple influences, including modernization as well as other cultures. It is well known that within Hawai‘i, a "broader 'local' multicultural perspective exists" (Kawelu 2015:3) While this "local" multicultural culture is deservedly celebrated, it must be noted that it has often come into contact with "traditional Hawaiian culture." This contact between cultures and traditions has undoubtedly resulted in numerous cultural entanglements. These cultural entanglements have prompted questions regarding the legitimacy of newly evolved traditional practices. The influences of "local" culture are well noted throughout this section, and understood to represent survivance or "the active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name. Native survivance stories are renunciations of dominance, tragedy and victimry" (Vizenor 1999:vii). Acknowledgement of these "local" influences help to inform nuanced understandings of entanglement and of a "living [Hawaiian] contemporary culture" (Kawelu 2015:3). This section strives to articulate traditional Hawaiian cultural practices as were practiced within the ahupua‘a in ancient times, and the aspects of these traditional practices that continue to be practiced today; however, this section also challenges "tropes of authenticity" (Cipolla 2013), and acknowledges the multicultural influences and entanglements that may "change" or "create" a tradition.

This section integrates information from Sections 3–6 in examining cultural resources and practices identified within or in proximity of the project area in the broader context of the encompassing Kawaipapa landscape. Excerpts from interviews are incorporated throughout this section where applicable.

## 7.1 *Nā Wahi Pana* (Storied Places)

The presence of *heiau* in Kawaipapa would suggest an ongoing leadership and dedication from *ali‘i* who controlled and frequented the area. Ke Alaloa o Maui is an excellent example of leadership from Kiha-a-Pi‘ilani. Beckwith (1970:387) states, "men are said to have stood in line and passed stones from seashore to upland." The construction of Ke Alaloa o Maui was instrumental during wartime and provided ease of access in transportation, however, it also left residents vulnerable to warring chiefs.

## 7.2 Fishing

In the legend of ‘Ai‘ai, he follows in the footsteps of his father, using his knowledge and power and his magic objects to set up new fishing grounds around the islands. In his travels, he makes a fishing ground in Hāna:

> The first fishing ground marked out by 'Aiai is that of the Hole-of-the-Ulua where the great eel hid. A second lies between Hāmoa and Hanao‘o in Hāna, where fish are caught by letting down baskets into the sea. A third is Koa-uli in the deep sea. A fourth is the famous akule fishing ground at Wana-ula mentioned above. At Honomaele he places three pebbles and they form a ridge where aweoweo fish gather. At Waiohue he sets up on a rocky islet the stone Paka to attract fish. From the cliff of Puhi-ai he directs the luring of the great octopus from its hole off Wailua-nui by means of the magic cowry shell and the monster is still to be seen turned to stone with one arm missing, broken off in the struggle. Leaving Hāna, he establishes fishing stations and altars along the coast all around the island as far as Kipahulu ... [Beckwith 1970:21-23].

The following ‘ōlelo no‘eau also gives insight to fishing in Hāna and mentions the same tale of ‘Ai‘ai:

> Hāna i ka i‘a iki.
>
> *Hāna of the little fish.*
>
> Hāna was known in ancient times as the land where fish were scarce. Believing slanderous tales about Ku‘ula and his wife, Hinahele, the ruling chief of Hāna ordered them destroyed. Having *mana* over the fish of the sea, the two caused a scarcity until their son ‘Ai‘ai brought them back to life. Ku‘ula and Hinahele were worshipped as deities by fishermen. [Pukui 1983:54]

The following *‘ōlelo no‘eau* mentions a way of communication for the people of Kawaipapa while fishing.

> Kawaipapa mūki.
>
> *Kaiwapapa of sibilant sounds.*
>
> When fishing, the natives of Kawaipapa, Hāna, Maui made smacking sounds with the lips rather than call out or speak to one another. [Pukui 1983:179]

## 7.3 Ceremonial and Religious practices

In 1928 and 1929, Walker (1931) conducted surveys of *heiau* on Maui and recorded four *heiau* in the vicinity of the current project area. Three of the sites were documented on the Keanini Point peninsula near the current project area: Walker Site 0105 (SIHP # 50-50-13-00105), Kaniomoku Heiau, Walker Site 0111 (SIHP # 50-50-13-00111) Honuaula Heiau, and Walker Site 0112 (SIHP # -00112) Kuawalu Heiau. Walker Site 0108 (SIHP # -00108) is an Unnamed Heiau on Nānu‘alele Point. The *heiau* were described by Walker (1931) as follows:

Walker Site 0105, Kaniomoku Heiau

Location: The cane lands above the road.

Description: Kaniomoku is mentioned by Thrum as the place where Kaahumanu spent her childhood. Her birthplace was in a large cave on the side of Kauiki Hill on the bay. The heiau has been totally destroyed. (Walker 1931:181)

Walker Site 0108, Unnamed Heiau

Name: Unknown

Location: On Keanini Point beyond the factory, 100 feet from the shore.

Description: A small heiau probably of the Kuula class. It is little more than a level spot in the lava, 30 x 35 feet. The front is toward the bay, and a line of stones marks the edge of a step terrace. On the east a natural rock ledge forms a wall, and there are indications of a small terrace below it. The back is formed by a platform 3 feet high, 10 feet wide, and 35 feet long. A large part of the interior of the heiau is occupied by a double platform whose edges do not coincide with the edge of the terrace. It is likely a burial platform. Large pieces of Aa make up the terrace with beach stones used for the divisions. Few pieces of coral seen. (Walker 1931:183)

Walker Site 0111, Honuaula Heiau and Walker Site 0112 Kuawalu Heiau

Names: Honuaula, Kuawalu

Location: Base of Kauiki Hill

Description: Two war heiaus built by King Hua-a-Pohukaina of Lahaina sometime during the early part of the 12th Century. Thrum in his 1917 list speaks of Honuaula being built prior to the raid on Hawaii. On his successful return he built Kuawalu, said to have measured 70 x 120 feet. All traces of both are now destroyed. This is presumably the same King Hua that built the heiaus of Waiie and Luakona at Lahaina. He is referred to in legend as the infamous ruler who put his chief priest to death and himself died miserably of famine with all his people as a result. (Walker 1931:186)

# Section 8 Summary and Recommendations

## 8.1 Results of Background Research

Background research for this study yielded the following results, presented in approximate chronological order:

1. The division of Maui’s lands into political districts first occurred during the rule of Kaka‘alaneo under the direction of his *kahuna* (priest) named Kalaiha‘ōhi‘a (Beckwith 1970:383).
2. Chief Pi‘ilani united all of Maui under his rule during the sixteenth or seventeenth century. Pi‘ilani’s sons, Lonopi‘ilani and Kiha-a-Pi‘ilani, fought for control of Maui.
3. Maui chiefs ruled Hāna until its conquest in the mid–18th century by Hawai‘i Island’s Chief Kalani‘ōpu‘u (Kamakau 1992:85−87). Decades of war between the island polities ensued, with Maui Chief Kahekili resuming rule of Hāna and all Maui until their conquest and incorporation into the united kingdom of Hawai‘i by Kamehameha in 1790 (Ulukau 2021a)
4. During the last half of the 18th century the battles between Maui and Hawai‘i were carried on by the high chiefs Kahekili of Maui and Kalani‘ōpu‘u of Hawai‘i. Kalani‘ōpu‘u was in control of the Hāna and Kipahulu areas from ca. 1759 to 1765 when Kahekili won out. However, the Hawai‘i forces were able to regain control from ca. 1775 to 1783 (Kamakau 1992:83-84).
5. With the death of Kalani‘ōpu‘u in 1782, Kahekili regained control of Hāna, which he retained, though not without further battles with Hawai‘i Island forces (i.e. Kamehameha), until his death in 1794 (Kamakau 1992:88-91)
6. With the death of Kahekili and the assistance of newly acquired foreign power (canons, muskets, men) Kamehameha gained control not only of Maui, but of all the Hawaiian Islands, except Kaua‘i, by 1795 (Kamaukau 1992:171).
7. Hāna is also associated with the *ali‘i nui* (supreme elite) Ke‘eaumoku Papaiaheahe and his *‘ohana*. His daughter, born at Pu‘u Ka‘uiki in the late 18th century, was Queen Ka‘ahumanu, wife of Kamehameha I (Kapiikauinamoku in *The Honolulu Advertiser*).
8. The ambition for successful commercial cultivation in East Maui continued to be the focus of all endeavors throughout the mid- and late-1800s. Sugar, coffee, and rubber plantations were started throughout the region with high hopes of success.
9. Hāna was one of the earliest locales to become involved in commercial cane operations in “1849 or 1850, when a Mr. Lindgren cultivated 60 acres of cane and ground it with a mill erected in a grass shack” (Condé and Best 1973:247).
10. During this early period of commercialization, small farmers apparently raised cane crops within LCAs and grants, and then sold the cane to the mills. By the end of the century, Hana Plantation had taken over large tracts of land and smaller farmers

disappeared, as did most of the remains associated with this era (Condé and Best 1973:247–250).

11. The paving of the Hāna Highway in 1962 increased tourist visitation in the project area vicinity. Afterwards, infrastructure and development projects in the 1970s through the present shaped the current landscape (Smith and Eadington 1992:128).
12. The Hāna Highway Historic District, which extends from Hoalua Bridge near Huelo in the Makawao District to Koukouai Bridge in the Kīpahulu District, includes 78 contributing feature components dating to over 50 years old. The Hāna Highway was also recognized as a Millennium Legacy Trail in 2000, and in 2001 was nominated to the National Register of Historic Places (NRHP).

## 8.2 Results of Community Consultation

CSH reached out to 45 NHOs, agencies, and community members. Six people/agencies responded to the consultation letter, one of them provided written testimony. CSH initiated its outreach effort in April 2021through April 2022. Below is the name of the agency who provided written testimony:

1. Department of Land and Natural Resources, Commisison on Water Resource Management

## 8.3 Mitigation Possibilities Identified During Background Research and Consultation

Due to insufficient responses from community consultation, CSH makes the following mitigation recommendations that may aid in promoting and preserving cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups:

1. Project construction workers and all other personnel involved in the construction and related activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that *iwi kūpuna* (ancestral remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43, is recommended.
2. In the event that *iwi kūpuna* and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance.

# Section 9 References Cited

**Akana, Collette Leimomi with Kiele Gonzalez**
2015 *Hānau Ka Ua, Hawaiian Rain Names*. Kamehameha Publishing, Honolulu.

**Alameida, Roy Kakulu**
1993 Land Tenure and Land Use in Kawaihapai, O‘ahu. Master’s thesis in History. University of Hawai‘i at Mānoa, Honolulu.

**Beaglehole, John C.**
1967 *The Journals of Captain James Cook on His Voyages of Discovery,* Volume 3: The Voyage of the Resolution and Discovery 1776-1780. Parts 1 & 2. Cambridge University Press for the Hakluyt Society, Cambridge, England.

**Beckwith, Martha W.**
1970 *Hawaiian Mythology.* University of Hawaii Press, Honolulu.

**Bishop, Sereno Edwards (editor)**
1861 *Report to the Board of Sandwich Islands Mission*. Hawaiian Mission Children's Society, Honolulu, HI.

**Bordner, Richard**
1981 Archaeological Reconnaissance and Subsurface Testing, Hotel Hana-Maui Expansion (TMK 1-4-04:22). Copies available from Environmental Impact Study Corp., Wananalua, Hawai‘i.

**Borthwick, Douglas F., Jennifer Robbins and William H. Folk**
1992 Archaeological Inventory Survey and Subsurface Testing for the Proposed Hana Ranch County Club, Hana Maui, Hawaii (TMK: 1-4-07:4, 6; 1-4-02:8, 9, 10, and 1-4-03:9). Prepared for Pacific Planning and Engineering., Cultural Surveys Hawaii, Kailua.

**Chaffee, David B., and Michael F. Dega**
2004 *Hāna Town Center Project Inventory Survey Wananalua Ahupua‘a, Hāna District, Hāna, Maui Island Hawai‘i [TMK: 1-4-03: 056]*. Copies available from Inc. Scientific Consultant Services, Honolulu.

**Chinen, Jon J.**
1958 *The Great Mahele, Hawaii’s Land Division of 1848*. University of Hawaii Press, Honolulu.

**Cipolla, Craig N.**
2013 Native American Historical Archaeology and the Trope of Authenticity. *Historical Archaeology.* Vol. 47, ed. 3:12–22.

**Cleghorn, Paul L., and Kathie Rogers**
1987 *Preliminary Historical and Archaeological Investigations of Hāna Ranch Lands, Maui, Hawaiian Islands*. Bernice Pauahi Bishop Museum, Honolulu.

**Condé, Jesse C. and Gerald M. Best**
l973 *Sugar Trains.* Glenwood Publishers, Felton, California.

**Cordy, Ross**

2000 *Exalted Sites the Chief: The Ancient History of Hawaii Island.* Mutual Publishing, Honolulu.

**Daily Honolulu Press**.

1883 "Reminiscenses of Honolulu." *Daily Honolulu Press,* Saturday 10 February.1, Honolulu, Hawai‘i.

**Daws, Gavan**

1968 *Shoal of Time.* Macmillan, New York.

**Duensing, Dawn E.**

2001 National Register of Historic Places Registration Form. Hana Belt Road. Manuscript.

2005 *Hana Belt Road HAER HI-75*. National Park Service, U.S. Department of the Interior, Washington, D.C.

**Emerson, Nathaniel B.**

1965 *The Unwritten Literature of Hawaii: The Sacred Songs of the Hula*. Collected by Nathaniel B. Emerson. Charles E. Tuttle Company, Rutland, Vermont and Tokyo.

**Estioko-Griffin, Agnes**

1988 *Field Inspection of Site 50-13-1813, Lava Tube, Kaeleku, Hana Maui TMK 1-3-09:20, 21*. State of Hawai‘i Department of Land and Natural Resources, State Historic Preservation Division, Honolulu, Hawai‘i.

**Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens**

1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* U.S. Department of Agriculture, Soil Conservation Service. Government Printing Office, Washington, D.C.

**Fornander, Abraham**

1916-1919 *Fornanders Collection of Hawaiian Antiquities and Folk-Lore*. Bishop Museum Memoirs IV, V, and VI. Bishop Museum Press, Honolulu.

1969 *An Account of the Polynesian Race,* Vol. II. Charles E. Tuttle Company, Rutland, Vermont and Tokyo, Japan.

1880 An Account of the Polynesian Race, its Origins and Migrations, and the Ancient History of the Hawaiian People to the Times of Kamehameha I. Vol. II, 6 Vols, edited by J. F. G. Stokes. Trubner & Co., London.

**Fredericksen, Erik M., and Demaris L. Fredericksen**

2002 *Archaeological Monitoring Report for the Lighting Installation Project for the Hana Ballpark, Wananalua Ahupua‘a, Hana District, Island of Maui (TMK: 1-4-04: 21)*. Submitted to Xamanek Researches, Pukalani, Hawai`i.

**Freeman, Sallie D.M., Holly Formolo, and Hallett H. Hammatt**

2004 *An Archaeological Monitoring Report for Hāna Highway Improvements Huelo to Hāna, M.P. 4.20 to 23.70 Districts of Makawao (Hāmākualoa and Ko'olau) and*

*Hana, Island of Maui (TMK: 2-1-1; 2-1-2; 2-1-3; 2-1-4;01-05; and 2-2-9:05, 06, 09, 10, 12, 13)*. Cultural Surveys Hawai'i, Inc., Wailuku, Hawai'i.

**Giambelluca, T., M. Nullet, and T. Schroeder**
1986 *Rainfall Atlas of Hawaii Report R76*. State of Hawai‘i, Department of Land and Natural Resources, Division of Water and Land Development, Honolulu.

**Google Earth Imagery**
2015 Aerial photographs of Hawai‘i. Google Inc., Mountain View, California. Available online at www.google.com/earth.html.

**Green, Jonathan S.**
1857 “Editorial.” *The Pacific Commercial Advertiser,* Thursday 5 November.1, Honolulu, Hawai‘i.

**Griffin, P. Bion, D. Keene, and Joseph Kennedy**
1987 Kakaako: Prediction of Sub-Surface Archaeological Resources, Kaka‘ako Community Development District–Archaeological Reconnaissance Survey. University of Hawai‘i, Honolulu.

**Hanaranch.com**
2021 Online at hanaranch.com/

**Handy, E.S. Craighill and Elizabeth G. Handy**
1972 Native Planters in Old Hawaii: Their Life, Lore, and Environment. Bishop Museum Bulletin 233. Bishop Museum Press, Honolulu.

**Hawai‘i TMK Service**
2014 Tax Map Key [1] 3-9-026:044. Hawai‘i TMK Service, Honolulu.

**Huapala.org**
2021 Hawaiian Music and Hula Archives. Online at huapala.org.

**Kamakau, Samuel Manaiakalani**
1961 *Ruling Chiefs of Hawai‘i.* Kamehameha Schools Press, Honolulu.
1992 *Ruling Chiefs of Hawai‘i.* Revised edition. Kamehameha Schools Press, Honolulu.

**Kame‘eleihiwa, Lilikalā**
1992 Native Land and Foreign Desires. Pehea La E Pono Ai? Bishop Museum Press, Honolulu.

**Kawaharada, Dennis**
1999 Storied Landscapes. Hawaiian Literature and Place. Kalamaku Press, Honolulu.

**Kawelu, Kathleen L.**
2015 Kuleana and Commitment: Working Toward a Collaborative Hawaiian Archaeology. Univeristy of Hawai‘i Press, Honolulu.

**Kuykendall, Ralph**
1938 *The Hawaiian Kingdom, Volume I: 1778-1884*. University of Hawaii Press, Honolulu.

**Jackson, George E.Gresley**

1882 Map of Kapueokahi Bay. Registered Map 1020. Hawai‘i Land Survey Divsion, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php

**Judd, Albert F., II, Bernice Judd, Barbara S. Wilcox and Elizabeth G. Alexander**

1969 *Missionary Album*. Sesquicentennial Edition. Hawaiian Mission Children's Society, Honolulu, HI.

**Kirch, Patrick V.**

2012 *A Shark Going Inland is My Chief: The Island Civilization of Ancient Hawai'i*. University of California Press, Berkeley, California.

**Kuykendall, Ralph**

1967 The Hawaiian Kingdom, 1874-1893: The Kalakaua Dynasty. University of Hawaii Press, Honolulu.

**Lucas, Paul F. Nahoa**

1995 *Dictionary of Hawaiian Legal Land-Terms*. Paul F. Nahoa Lucas, compiler and editor. Native Hawaiian Legal Corporation, Honolulu.

**Macfarlane, E.C.**

1892 “Proclamation.” *The Daily Bulletin,* Tuesday, 4 October 1892. Vol. Volume IV. No. 539. No. 2:2, Honolulu, Hawai‘i https://www.newspapers.com/image/49967668.

**Maclennan, Carol A.**

1997 *Hawai‘i Turns to Sugar: The Rise of Plantation Centers, 1860-1880*. The Hawaiian Journal of History. Volume 31. University of Hawai‘i Press, Honolulu.

**Malo, David**

1951 *Hawaiian Antiquities (Moolelo Hawaii)*. Second edition. Nathaniel B. Emerson, translator. Bishop Museum Press, Honolulu.

**McAllister, J. Gilbert**

1933 *Archaeology of Oahu*. Bishop Museum Bulletin 104. Bernice Pauahi Bishop Museum, Honolulu.

**McCurdy, Todd D., Tanya L. Lee-Greig and Hallett H. Hammatt**

2014 Literature Review and Field Inspection for the Proposed Hana Highway Improvements, Huelo to Hāna, Phase II, Project, Makaīwa Ko‘olau Ahupua‘a, Hāna District, Maui Island TMK: [2] 1-1-001:999; [2] 1-1-002:999; [2] 1-1-007:999; [2] 1-1-008:999; [2] 1-1-009:999 and [2] 1-2-001:999 (pors). Cultural Surveys Hawaii, Wailuku, HI.

**McGregor, Davianna Pomaika‘i**

1996 *Nā Kua‘āina: Living Hawaiian Culture.* University of Hawai‘i Press, Honolulu.

2007 *Nā Kua‘āina: Living Hawaiian Culture*. University of Hawai‘i Press, Honolulu, HI.

**McQuagge, Richard L.**

1990 *Archaeological Report for Hana, Maui, Hawaii TMK 1-4-13:14, 15*. Copies available from Richard L. McQuagge, Haiku, Hawaii.

**Meares, John**

1791 *Extracts from: Voyages Made in the Years 1788 and 1789 From China to the Northwest Coast of America, with an Introductory Narrative of a Voyage Performed in 1786, from Bengal, in the Ship "Nootka"*. Translated by B. Cartwright. Hawaiian Historical Society Reprints. Legographic Press, London.

**Mifflin, Thomas**

1983 Schooner from Windward. Two Centuries of Hawaiian Interisland Shipping. University of Hawaii Press, Honolulu.

**MKE Associates LLC and Inc. Fung Associates**

2013 Hawaii State Historic Bridge Inventory and Evaluation. Hawaii.

**Nagamine Okawa Engineers Inc. and Inc. Fung Associates**

2015 Hana Highway, Route 360 Bridge Preservation Plan, Honolulu, Hawai‘i.

**Nakuina, Moses K.**

1902 Ipumakani a Laamaomao. *Moolelo Hawaii o Pakaa a me Ku-a-Pakaa.* Kalamakū Press, Honolulu.

1990 *The Wind Gourd of La‘amaomao*. First edition. Esther T. Mookini and Sarah Nākoa, translators. Kalamakū Press, Honolulu.

**Oceanit**

2000 *Hana Highway Rockfall Mitigation Plan*. Oceanit Laboratories, Inc., Honolulu, Hawai‘i.

**Oliveira, Katrina-Ann R.K.**

2014 *Kaona 101: Towards Understanding Kaona in Mele.* Hawai‘i.

**Orr, Maria E., Hallett H. Hammatt, and Victoria S. Creed**

1997 *An Archaeological Subsurface Testing at a Parcel Adjacent to the Hana Cultural Center, Hana, Maui (TMK 1-4-13:14 & 15)*. Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

**Pauketat, Timothy R.**

2001 *The Archaeology of Traditions*. University Press of Florida, Gainesville, Florida.

**Perzinski, David, and Michael Dega**

2011 An Archaeological Monitoring Report for the New Lahainaluna High School Cafeteria Lahaina, Panaewa Ahupua'a, Lahaina District Maui Island, Hawai'i [TMK (2) 4-6-018: 012 por.]. Scientific Consultant Services, Inc., Honolulu.

**Pukui, Mary K.**

1949 Songs (Meles) of Old Ka‘u, Hawaii. *Journal of American Folklore*, July-September: 247–258.

1983 *‘Ōlelo No‘eau: Hawaiian Proverbs and Poetical Sayings*. Bishop Museum Special Publication No.71. Bishop Museum Press, Honolulu.

1995 *Na Mele Welo: Songs of Our Heritage.* University of Hawai‘i Press, Honolulu.

**Pukui, Mary K. and Samuel H. Elbert**
1986 *Hawaiian Dictionary.* Second edition. University of Hawaii Press, Honolulu.

**Pukui, Mary Kawena and Laura C.S. Green**
1995 *Folktales of Hawai‘i.* Bishop Museum Press, Honolulu.

**Richards, William and Charles Samuel Stewart**

1825 *The Missionary Herald*. Vol. 21, edited by ABCFM. The Proceedings At Large of the American Board of Foreign Missions with a General View of Other Benevolent Operations. Crocker and Brewster, Boston.

**Rotunno-Hazuka, Lisa, Jenny O'Claray-Nu, and Jeffrey Pantaleo**
2018 *Archaeological Inventory Survey for an Agriculturally Zoned Parcel Located in Kawaipapa Ahupua‘a, Hāna District, Island of Maui TMK: (2) 1-4-006:014 pors*. Copies available from LLC. Archaeological Services Hawaii, Pu‘unēnē, Hawai‘i.

**Savehanacoast.org**
2018 – 2020 *Hāna Lands.* Ke Ao Hāli‘i, Save Hāna Coast. https://savehanacoast.org/hana-lands/

**Schmitt, Robert C.**
1977 *Historical Statistics of Hawaii.* University of Hawaii Press, Honolulu.

**Schoofs, Robert**
1978 *Pioneers of the Faith: History of the Catholic Mission in Hawaii*. Revised by Fay Wren Kidkiff. Sturgis Printing Company, Honolulu.

**Sinoto, Aki**
1985 *Archaeological Reconnaissance-- Hana Ranch, Proposed Garden Cottages, Hana, Maui, Hawaii; TMK 1-4-03:3; 1-4-04:16, 17*. Copies available from Bishop Museum, Honolulu.

**Smith, V. L., & Eadington, W. R.**
1992 Tourism alternative: Potentials and problems in the development of tourism. Philadelphia: University of Pennsylvania Press.

**Speakman Jr., Cummins E.**
1978 *Mowee: An Informal History of the Hawaiian Island*. Nimrod Press, Boston.

**Sterling, Elspeth P.**
1998 *Sites of Maui*. Bishop Museum Press, Honolulu.

**Stokes, John F.G.**
1917 Report on the Heiau of Maui. In *Hawaiian Alamanac and Annual for 1913 The Reference Book of Information and Statistics Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others.*, edited by Thomas G. Thrum, pp. 125. Thos. G. Thrum, Honolulu.

**The Hawaiian Star**.

1897 “Hana's Future.” *The Hawaiian Star,* February 2, 1897. Vol. III No.:5, Honolulu, Hawaii. 1186 edition.

1898 “Big Prices.” *The Hawaiian Star,* December 19, 1898. Vol. V No.:4, Honolulu, Hawaii. 2061 edition.

**The Honolulu Advertiser**.

1910 “Through the Hana District of Maui.” *The Honolulu Advertiser,* 4 September 1910.13, Honolulu, Hawaii. http://www.newspapers.com/image/258541235.

1914 “The “Ditch Country”--A Wonder Land--By Jack London.” *The Honolulu Advertiser,* Saturday, 28 November 1914. Honolulu, Hawaii.www.newspapers.com/image/267770412.

1955 “The Story of Hawaiian Royalty.” *The Honolulu Advertiser,* 1955. Honolulu, Hawaii. https://ulukau.org/elib/collect/sohr/index/assoc/D0.dir/doc142.pdf

**The Pacific Commercial Advertiser**.

1869b “The Epidemic.” *The Pacific Commercial Advertiser,* October 2, 1869.3Honolulu, Hawaii.

**The Polynesian.**

1853a *The Polynesian* November 19, 1853. Vol. 10 No. 2Honolulu, Hawaii. 28 edition.

1853b “For the Polynesian.” *The Polynesian* December 24, 1853. Vol. 10 No. 2Honolulu, Hawaii. 33 edition.

1854 *The Polynesian* January 21, 1854. Vol. 10 No. 2Honolulu, Hawaii. 37 edition.

**Thrum, Thomas G.**

1909a Chapter of Firstling's. In *The Hawaiian Annual*, edited by T. G. Thrum, pp. 129. Thos. G. Thrum, Honolulu, HI.

1909b Heiaus: Their Kinds, Construction, Ceremonies, Etc. In *The Hawaiian Almanac and Annual for 1910*, edited by T. G. Thrum, pp. 53-71. Thos. G. Thrum, Honolulu, Hawai‘i

**Ulukau**

2021 Hawaiian Electronic Library, http://ulukau.org/cgi-bin/ vicki?l=en..

**USGS (U.S. Geological Survey)**

1992 Hana USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

**Vizenor, Gerald**

1999 *Manifest Manners: Narratives on Postindian Survivance*. University of Oklahoma Press, Lincoln, Oklahoma.

**Walker, Winslow**

1931 *Archaeology of Maui*. Bernice Pauahi Bishop Museum, Honolulu.

**Wilson Okamoto & Associates, Inc.**

2001 Final Preservation Plan for County of Maui Bridges Within the Hana Highway Historic District. County of Maui, Department of Public Works and Waste Management.

**Yucha, Trevor M. and Hallett H. Hammatt**

2017 Archaeological Inventory Survey Report for the Proposed Nahiku Community Center Project, Nahiku Ahupuaa, Hana District, Maui Island, TMK: [2] 1-2-002:023 (por.). Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

# Appendix A Comments from the Department of Land and Natural Resources Commission on Water Resource Management

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON

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ELIZABETH A. CHAR, M.D.
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DEPUTY DIRECTOR

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

August 9, 2021

REF: RFD.5721.6

TO: Chantellee Spencer, Cultural Researcher
Cultural Surveys Hawaii, Inc.

FROM: M. Kaleo Manuel, Deputy Director
Commission on Water Resource Management

SUBJECT: Cultural Impact Assessment for the Helene Hall Septic System Improvements Project, Hana, Maui

FILE NO.: RFD.5721.6
TMK NO.:

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://dlnr.hawaii.gov/cwrm.

Our comments related to water resources are checked off below.

- [ ] 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- [ ] 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- [ ] 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.
- [ ] 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.
- [x] 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/
- [ ] 6. We recommend the use of alternative water sources, wherever practicable.
- [ ] 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/green-business-program.
- [ ] 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf.

Figure 16. Response from DLNR Commission on Water Resource Management, Page one

Chantellee Spencer
Page 2
August 9, 2021

- [X] 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- [ ] 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.
- [ ] 11. A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.
- [ ] 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
- [ ] 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
- [ ] 14. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- [ ] 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.
- [ ] 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.
- [ ] 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- [ ] 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

- [ ] OTHER:

If you have any questions, please contact Neal Fujii of the Commission staff at 587-0216.

Figure 17.Response from DLNR Commission on Water Resource Management, Page two

# DRAINAGE MEMO

# APPENDIX

# E

July 28, 2020

# Memorandum

To:

From: Sean Klein PE

Subject: Helene Hall Septic System Replacement – Drainage Review
KJ 1967003*00

## Project Description

The County of Maui (County), Department of Parks and Recreation (Parks) owns and operates two onsite aerobic treatment units (ATUs) and two effluent disposal cesspools that are intended to provide wastewater treatment and disposal for Helene Hall, in Hana, Maui. The ATUs are currently not functioning as designed and are serving more as solids settling and holding tanks before the wastewater is disposed of in the cesspools. Additionally, the cesspools do not have enough capacity to discharge the normal daily flows. This causes the wastewater to back-up into the ATU system and requires staff to frequently (at least weekly) pump down the ATUs and cesspools. Due to these treatment and disposal deficiencies, the County Department of Environmental Management, Wastewater Reclamation Division (WWRD) is tasked with upgrading the existing treatment system to better serve the community.

The project site is located at TMK 1-4-04:29 and 34. See Figure 1 for Location and Vicinity Map.

The proposed treatment alternative involves rehabilitating one of the existing ATU with a new aeration blower and the other ATU will be repurposed as a wastewater pump station. The wastewater will be pumped uphill to a new treatment system and absorption field located at the Hana Ball Park, which is about a quarter mile from Helene Hall. The force main will be approximately 1,500 feet long and be aligned along Keawa Place (State road) and Uakea Road (County road). The force main will be buried and run to the grassed parking area for the Hana Ball Park to the new treatment and disposal systems.

## Existing Drainage Condition

The approximate existing elevations at the treatment and disposal site at Hana Ball Park range between 65 and 63 feet above mean sea level. Existing site slopes are approximately two (2) percent and sheet flow north-east towards Uakea Road. Flows continues north along Uakea Road before discharging to an existing drainage ditch along Keawa Place.

The soil classification found at the site consists of Hana silty clay loam (HKNC). Soil information was obtained from the NRCS's Web Soil Survey. The project site is located in Zone X. Zone X is defined as areas that are in a low to moderate risk flood zone and are not subject to the requirements of the Flood Hazard District Ordinance, Chapter 19.62 of the Maui County Code.

The calculated total surface runoff from the existing site is 0.25 cfs. Calculation is based on:

Reference: Department of Public Works, *Rules for the Design of Storm Drainage Facilities in the County of Maui*

Design Criteria:

Rational Method: Q = C x I x A

Q: flow rate in cubic feet per second

C: runoff coefficient

I: rainfall intensity in inches per hour

A: drainage area in acres

Where,

C = 0.25 from Table 1:

- Infiltration – Medium (0.07)
- Relief – Flat (0.0)
- Vegetal Cover – Good (0.03)
- Development Type – Agricultural/Park (0.15)

I = 9.8 in/hr from Plate 2

- Design Storm: 10-year, 1-hour storm

- i = 3.8 inches from Plate 4
- Tc = 5 minutes

A = 0.1 acres

Q = C x I x A = 0.25 cfs

## Proposed Drainage Condition

The proposed drainage condition matches the existing condition. There is no grading associated with the proposed improvements project. There is no change in the anticipated runoff volume or the existing drainage pattern or discharge point.

See Figure 2 for Proposed Improvements.

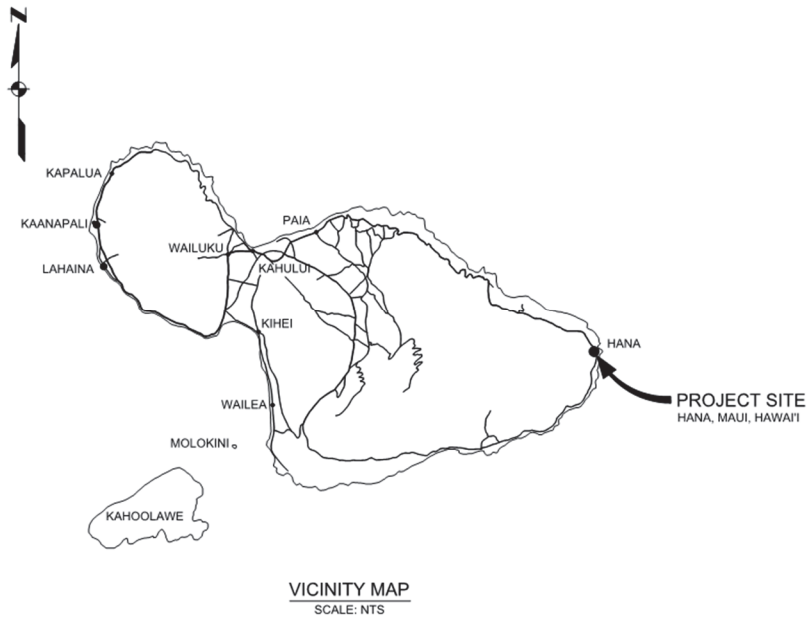
Hana Community Center Building F Parking Improvements is a separate project being proposed by others. These improvements include a driveway, parking lot and drainage basin in the vicinity and are reflected on the site plan for reference.

## Conclusion

Under the existing conditions, the total peak flow rate generated from the site is approximately 0.25 cfs.

No grading and no increase in runoff is anticipated from the proposed condition. The proposed improvement is not expected to have an adverse effect on the existing downstream properties.

# Figures



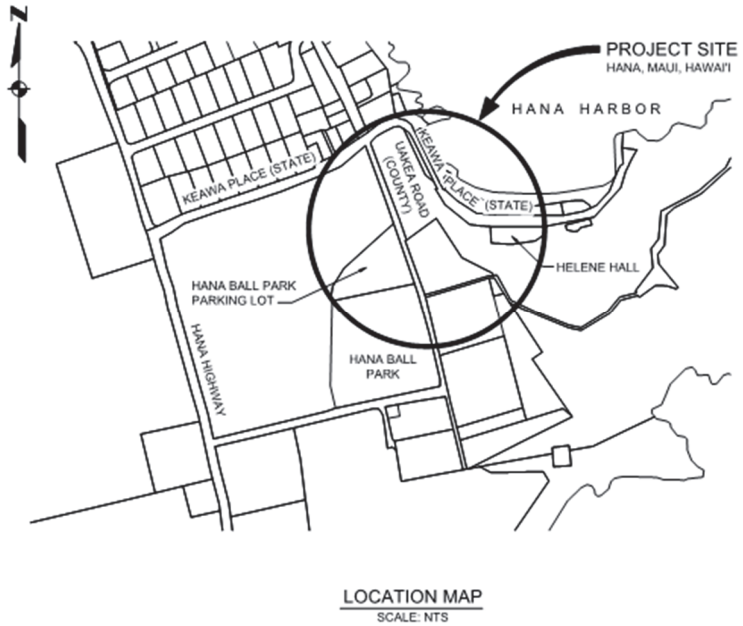




**Figure 1. Location and Vicinity Map**

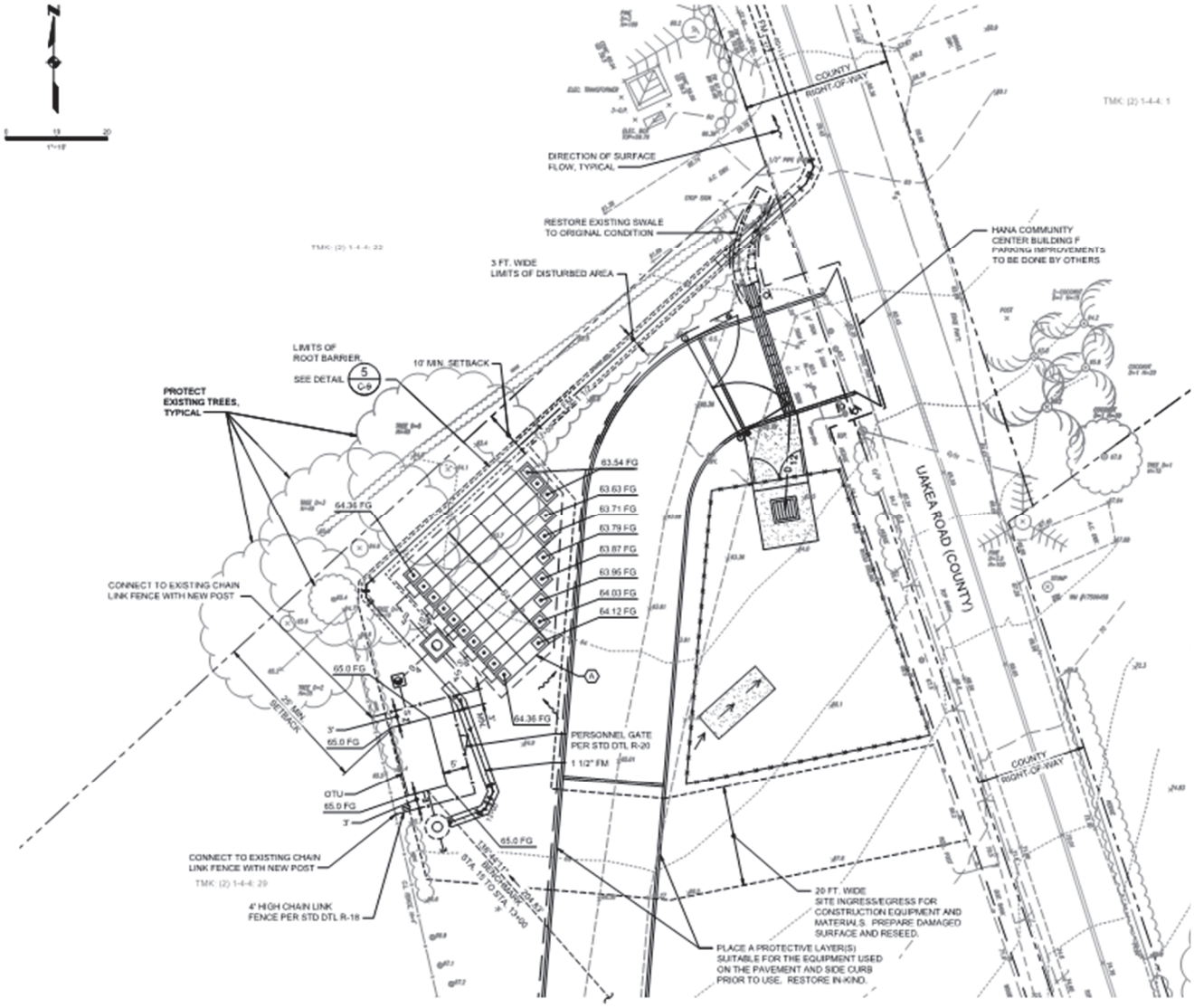



**Figure 2. Proposed Development**

# References

# Table 1

## GUIDE FOR THE DETERMINATION OF RUNOFF COEFFICIENTS FOR BUILT-UP AREAS*

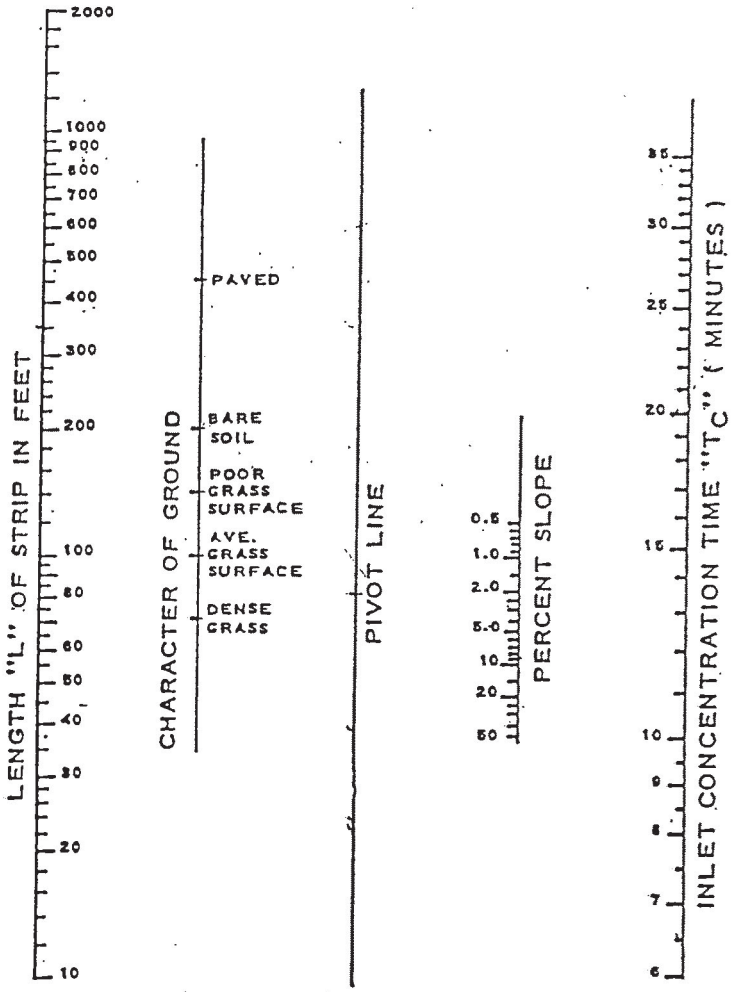
| WATERSHED CHARACTERISTICS | EXTREME | HIGH | MODERATE | LOW |
|---|---|---|---|---|
| INFILTRATION | NEGLIGIBLE<br>0.20 | SLOW<br>0.14 | MEDIUM<br>0.07 | HIGH<br>0.0 |
| RELIEF | STEEP<br>(> 25%)<br>0.08 | HILLY<br>(15 - 25%)<br>0.06 | ROLLING<br>(5 - 15%)<br>0.03 | FLAT<br>(0 - 5%)<br>0.0 |
| VEGETAL COVER | NONE<br>0.07 | POOR<br>(< 10%)<br>0.05 | GOOD<br>(10 - 50%)<br>0.03 | HIGH<br>(50 - 90%)<br>0.0 |
| DEVELOPMENT TYPE | INDUSTRIAL & BUSINESS<br>0.55 | HOTEL - APARTMENT<br>0.45 | RESIDENTIAL<br>0.40 | AGRICULTURAL<br>0.15 |

**NOTE: The design coefficient "c" must result from a total of the values for all four watershed characteristics of the site.*

# Table 2

## RUNOFF COEFFICIENTS

| Type of Drainage Area | Runoff Coefficient C |
|---|---|
| Business: | |
| Downtown areas | 0.95 |
| Neighborhood areas | 0.70 |
| Residential: | |
| Single-family areas | 0.50 |
| Multi-units, detached | 0.60 |
| Multi-units, attached | 0.75 |
| Suburban | 0.40 |
| Apartment dwelling areas | 0.70 |
| Industrial: | |
| Light areas | 0.80 |
| Heavy areas | 0.90 |
| Parks, cemeteries | 0.25 |
| Playgrounds | 0.35 |
| Railroad-yard areas | 0.40 |
| Unimproved areas | 0.30 |
| Streets: | |
| Asphaltic | 0.95 |
| Concrete | 0.95 |
| Brick | 0.85 |
| Drive and walks | 0.85 |
| Roofs | 0.95 |
| Lawns: | |
| Sandy, soil, flat, 2% | 0.10 |
| Sandy, soil, avg., 2-7% | 0.15 |
| Sandy, soil, steep, 7% | 0.20 |
| Heavy soil, flat, 2% | 0.17 |
| Heavy soil, avg., 2-7% | 0.22 |
| Heavy soil, steep, 7% | 0.35 |

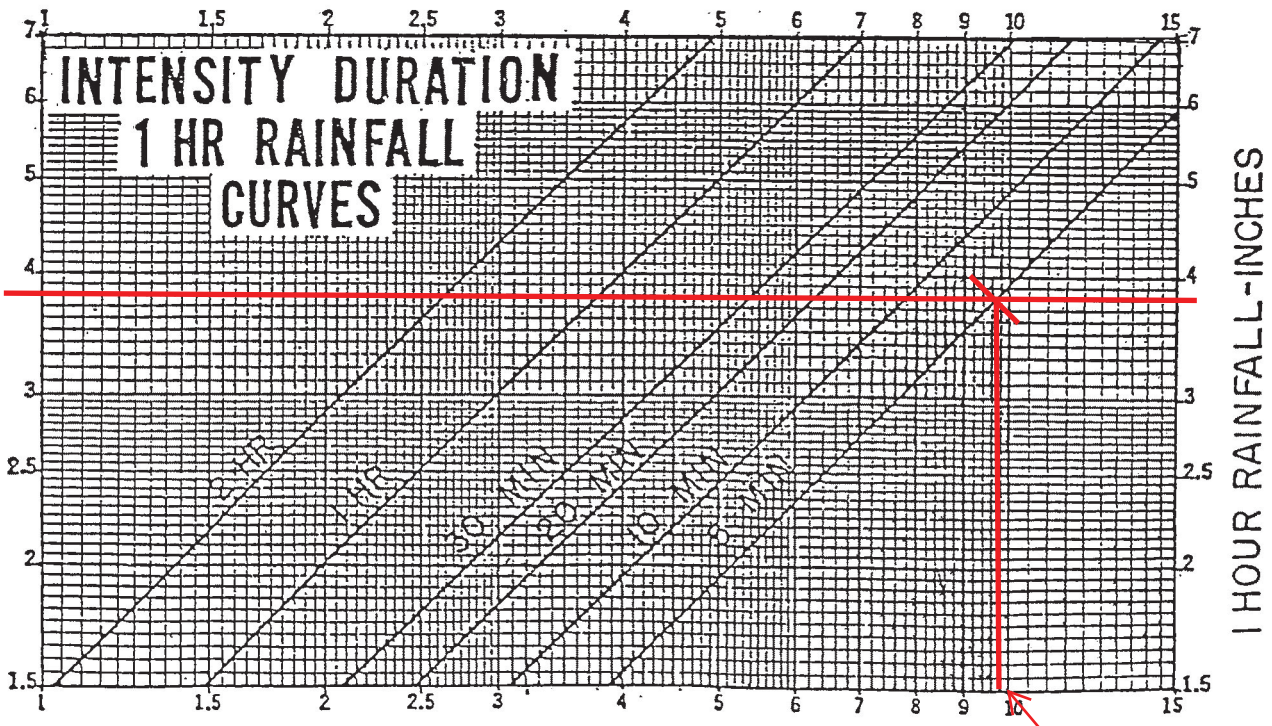



Tc = 5 Min

# Plate 1

# Overland Flow Chart

## Plate 2



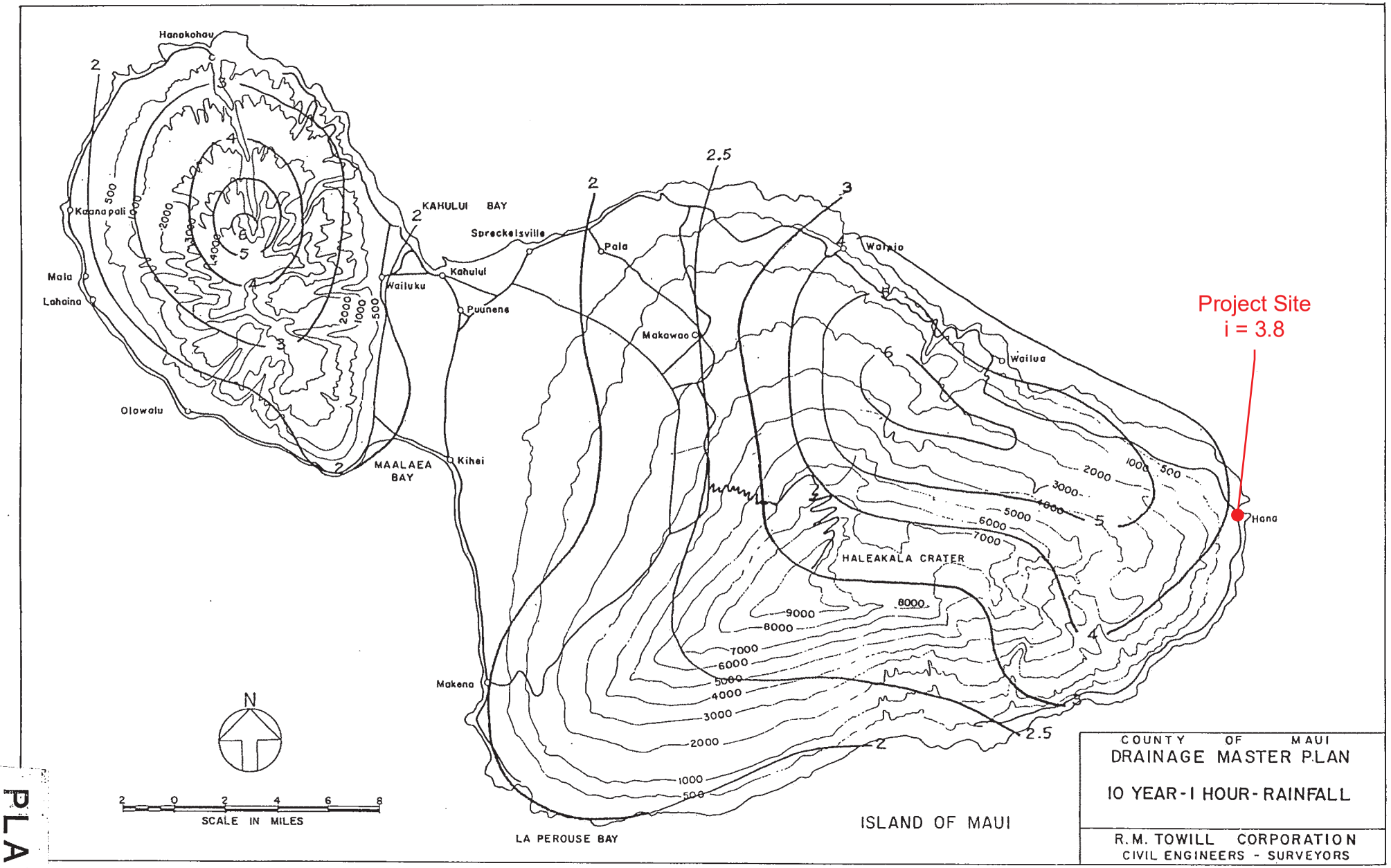

Hanokohau
Kaanapali
Mala
Lahaina
Olowalu
KAHULUI BAY
Spreckelsville
Kahului
Wailuku
Puunene
Pala
Makawao
Kihei
MAALAEA BAY
Makena
LA PEROUSE BAY
Waikio
Wailua
Hana
HALEAKALA CRATER
Project Site
i = 3.8
N
SCALE IN MILES
ISLAND OF MAUI
COUNTY OF MAUI
DRAINAGE MASTER PLAN
10 YEAR-1 HOUR-RAINFALL
R.M. TOWILL CORPORATION
CIVIL ENGINEERS - SURVEYORS

PLATE 4

# ANALYSIS OF THE PROJECT'S CONFORMANCE WITH THE HAWAI'I STATE PLAN

## APPENDIX

# F-1

# APPENDIX F-1

## Analysis of Project Applicability to Hawai‘i State Plan

Chapter 226, HRS, also known as the Hawai‘i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-term development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The Plan consists of three (3) parts. Part I includes the Overall Theme, Goals, Objectives, and Policies; Part II includes Planning, Coordination, and Implementation; and Part III establishes Priority Guidelines. Inasmuch as Part II of the State Plan covers its administrative structure and implementation process, discussion of the proposed project’s applicability to Part II is not appropriate. Below is an analysis of the project’s applicability to Part I and Part III of the Hawai‘i State Plan.

The methodology for the analysis involves examining the project’s applicability to the Hawai‘i State Plan’s goals, objectives, and policies. “Applicability” refers to a project’s need, purpose and effects, and how these advance or promote a particular set of goals, objectives and priority guidelines. In assessing the relationship between a proposed action and the Hawai‘i State Plan, an action may be categorized in one of the following groups:

1. **Directly applicable**: the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

   **Example:** A county project to develop a new water source and related transmission facilities would be directly applicable to the objectives and policies for Facility Systems-Water (HRS 226-16) which states” *(5) Support water supply services to areas experiencing critical water problems.*

2. **Indirectly applicable**: the action and its potential effects indirectly supports or advances the objective, policy or priority guideline.

   **Example:** The county water source project cited above supports other related objectives and policies for the economy (HRS 226-6, General), which, by example, states: *(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.* In this case, the principle purpose of the project was not to create new construction activities, but nonetheless, supports this policy by creating temporary construction activity during the implementation of the project. In this instance, the proposed action may be deemed to be indirectly applicable to the objective and policy of the Hawai‘i State Plan.

3. **Not applicable**: the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Hawai‘i State Plan.

**Example:** That same county water source improvement project referenced above, may not have direct or indirect linkage to objectives and policies for the economy-Federal Expenditures (HRS 226-9) which states: *(1) Encourage the sustained flow of federal expenditures in Hawaii that generates long-term government civilian employment*. From the standpoint of the agency proposing the water system improvement, and assuming no Federal Funding for the project, there is an unlikely intent that the proposed water source project would be connected to or reliant upon the foregoing policy. Hence, from the standpoint of judiciously applied policy analysis, the proposed action would be considered not applicable to the policy.

In general, a proposed action's applicability the objectives, policies and priority guidelines of the Hawai'i State Plan is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions.

| **Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies**<br>**Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable** | **DA** | **IA** | **NA** |
|---|---|---|---|
| **HRS 226-1: Findings and Purpose** | | | |
| **HRS 226-2: Definitions** | | | |
| **HRS 226-3: Overall Theme** | | | |
| **HRS 226-4: State Goals**. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self determination, it shall be the goal of the State to achieve:<br>(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.<br>(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.<br>(3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life. | | | |
| ***Analysis:*** **The proposed project is directly applicable to HRS 226-4 State Goals related to physical and social well-being for individuals and families in Hawai'i. The upgrades to the Helene Hall and commercial kitchen wastewater treatment facility and disposal system will ensure the community facility be available for social gatherings and physical activities for current and future generations. The proposed project is also indirectly applicable to achieving a desired physical environment characterized by cleanliness and stable natural systems. The proposed wastewater treatment facility and disposal field will be relocated offsite at the Hāna Ball Park, approximately 0.25 mile from the shoreline to protect the nearshore marine environment.** | | | |
| **Chapter 226-5 Objective and Policies for Population** | | | |
| **Objective:** It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter. | | ✓ | |

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| **Policies:** | | | |
| (1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county. | | ✓ | |
| (2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires. | | | ✓ |
| (3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands. | | ✓ | |
| (4) Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population. | | | ✓ |
| (5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members. | | | ✓ |
| (6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population. | | | ✓ |
| (7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area. | | | ✓ |
| ***Analysis:*** **The proposed upgrades to the Helene Hall wastewater treatment system project is indirectly applicable to guiding population growth to be consistent with the achievement of physical, economic and social, and objectives of HRS 226. The proposed project involves wastewater treatment upgrades and a new disposal field for the existing Helene Hall community facility and commercial kitchen and is indirectly applicable to directing population growth in areas planned and designated for urban expansion. The proposed project is located within the Hāna Small Town Boundary and will ensure the community facility's wastewater system meets health standards and available for current and future generations.** | | | |
| **Chapter 226-6 Objectives and policies for the economy – – in general** | | | |
| **Objectives:** Planning for the State's economy in general shall be directed toward achievement of the following objectives: | | | |
| (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited. | | ✓ | |
| (2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands. | | | ✓ |
| **Policies:** | | | |
| (1) Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State. | | | ✓ |
| (2) Expand Hawaii's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State. | | | ✓ |

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| (3) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people. | | | ✓ |
| (4) Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities. | | | ✓ |
| (5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii. | | | ✓ |
| (6) Seek broader outlets for new or expanded Hawaii business investments. | | | ✓ |
| (7) Expand existing markets and penetrate new markets for Hawaii's products and services. | | | ✓ |
| (8) Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation. | | | ✓ |
| (9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives. | | ✓ | |
| (10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors. | | | ✓ |
| (11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility. | | | ✓ |
| (12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii. | | | ✓ |
| (13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities. | | | ✓ |
| (14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems. | | | ✓ |
| (15) Maintain acceptable working conditions and standards for Hawaii's workers. | | | ✓ |
| (16) Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures. | | | ✓ |
| (17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited. | | | ✓ |
| (18) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology. | | | ✓ |
| (19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy. | | | ✓ |
| (20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular. | | | ✓ |

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| (21) Foster a business climate in Hawaii--including attitudes, tax and regulatory policies, and financial and technical assistance programs-- that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment system upgrades at Helene Hall and is indirectly applicable to the objectives and policies related to the economy in general. In the short term, the proposed project will support construction jobs and material supply companies during project construction.** | | | |
| **Chapter 226-7 Objectives and policies for the economy – – agriculture.** | | | |
| **Objectives:** Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives: | | | |
| (1) Viability of Hawaii's sugar and pineapple industries. | | | ✓ |
| (2) Growth and development of diversified agriculture throughout the State. | | | ✓ |
| (3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being. | | | ✓ |
| **Policies:** | | | |
| (1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy. | | | ✓ |
| (2) Encourage agriculture by making the best use of natural resources. | | | ✓ |
| (3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture. | | | ✓ |
| (4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits. | | | ✓ |
| (5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy. | | | ✓ |
| (6) Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries. | | | ✓ |
| (7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's food producers and consumers in the State, nation, and world. | | | ✓ |
| (8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products. | | | ✓ |
| (9) Enhance agricultural growth by providing public incentives and encouraging private initiatives. | | | ✓ |
| (10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs. | | | ✓ |
| (11) Increase the attractiveness and opportunities for an agricultural education and livelihood. | | | ✓ |

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| (12) In addition to the State's priority on food, expand Hawaii's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises. | | | ✓ |
| (13) Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency, including the increased purchase and use of Hawaii-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104. | | | ✓ |
| (14) Promote and assist in the establishment of sound financial programs for diversified agriculture. | | | ✓ |
| (15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment. | | | ✓ |
| (16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses. | | | ✓ |
| (17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko i‘a, māla, and irrigated lo‘i, and growth of traditional Hawaiian crops, such as kalo, ‘uala, and ‘ulu. | | | ✓ |
| (18) Increase and develop small-scale farms. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is not applicable to the objectives and policies related to ensure that the agriculture industry continues as an essential component of the State's well-being.** | | | |
| **Chapter 226-8 Objective and policies for the economy – – visitor industry.** | | | |
| **<u>Objective</u>:** Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy. | | | ✓ |
| **<u>Policies</u>:** | | | |
| (1) Support and assist in the promotion of Hawaii's visitor attractions and facilities. | | | ✓ |
| (2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people. | | | ✓ |
| (3) Improve the quality of existing visitor destination areas by utilizing Hawaii's strengths in science and technology. | | | ✓ |
| (4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities. | | | ✓ |
| (5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people. | | | ✓ |
| (6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry. | | | ✓ |
| (7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit. | | | ✓ |
| (8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed wastewater treatment system upgrades at Helene Hall is not applicable to the objective of a visitor industry that constitutes a major component of steady growth for Hawai‘i’s economy.** | | | |
| **Chapter 226-9 Objective and policies for the economy – – federal expenditures.** | | | |
| **<u>Objective</u>:** Planning for the State’s economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii’s economy. | | | ✓ |
| **<u>Policies</u>:** | | | |
| (1) Encourage the sustained flow of federal expenditures in Hawaii that generates long-term government civilian employment; | | | ✓ |
| (2) Promote Hawaii’s supportive role in national defense, in a manner consistent with Hawaii’s social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawaii’s economy; | | | ✓ |
| (3) Promote the development of federally supported activities in Hawaii that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii’s environment; | | | ✓ |
| (4) Increase opportunities for entry and advancement of Hawaii’s people into federal government service; | | | ✓ |
| (5) Promote federal use of local commodities, services, and facilities available in Hawaii; | | | ✓ |
| (6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii; and | | | ✓ |
| (7) Pursue the return of federally controlled lands in Hawaii that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal upgrades at Helene Hall and is not applicable to the objective of seeking a stable federal investment base as an integral component of Hawai‘i’s economy.** | | | |
| **Chapter 226-10 Objective and policies for the economy – – potential growth and innovative activities.** | | | |
| **<u>Objective</u>:** Planning for the State’s economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii’s economic base. | | | ✓ |
| **<u>Policies</u>:** | | | |
| (1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii’s economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors; | | | ✓ |

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| (2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaii through the export of services or products or substitution of imported services or products; | | | ✓ |
| (3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements; | | | ✓ |
| (4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity; | | | ✓ |
| (5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus; | | | ✓ |
| (6) Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people; | | | ✓ |
| (7) Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts; | | | ✓ |
| (8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste; | | | ✓ |
| (9) Promote Hawaii's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State; | | | ✓ |
| (10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawaii's social, economic, physical, and environmental objectives; | | | ✓ |
| (11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research; | | | ✓ |
| (12) Develop, promote, and support research and educational and training programs that will enhance Hawaii's ability to attract and develop economic activities of benefit to Hawaii; | | | ✓ |
| (13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaii; | | | ✓ |
| (14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives; | | | ✓ |
| (15) Increase research and development of businesses and services in the telecommunications and information industries; | | | ✓ |
| (16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation; and | | | ✓ |
| (17) Recognize and promote health care and health care information technology as growth industries. | | | ✓ |

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| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at Helene Hall and is not applicable to the objective of planning for potential growth and innovative activities.** | | | |
| **Chapter 226-10.5 Objectives and policies for the economy – – information industry.** | | | |
| **<u>Objective</u>:** Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region. | | | ✓ |
| **<u>Policies</u>:** | | | |
| (1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaii and between Hawaii and the world, and make high speed communication available to all residents and businesses in Hawaii; | | | ✓ |
| (2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaii to accommodate future growth and innovation in Hawaii's economy; | | | ✓ |
| (3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii; | | | ✓ |
| (4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state; | | | ✓ |
| (5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry; | | | ✓ |
| (6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people; | | | ✓ |
| (7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry; | | | ✓ |
| (8) Foster a recognition of the contribution of the information industry to Hawaii's economy; and | | | ✓ |
| (9) Assist in the promotion of Hawaii as a broker, creator, and processor of information in the Pacific. | | | ✓ |
| ***Analysis:*** **The proposed scope of improvements for the Helene Hall wastewater system is not applicable to the objective and policies of developing information technologies, broadband and wireless communication capability, and positioning Hawai‘i as a leader in broadband communications and applications in the Pacific Region.** | | | |
| **Chapter 226-11 Objectives and policies for the physical environment – – land based, shoreline, and marine resources.** | | | |
| **<u>Objectives:</u>** Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives: | | | |
| (1) Prudent use of Hawaii's land-based, shoreline, and marine resources. | | ✓ | |
| (2) Effective protection of Hawaii's unique and fragile environmental resources. | | ✓ | |

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| **Policies:** | | | |
| (1) Exercise an overall conservation ethic in the use of Hawaii's natural resources. | | ✓ | |
| (2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems. | | ✓ | |
| (3) Take into account the physical attributes of areas when planning and designing activities and facilities. | | ✓ | |
| (4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage. | | | ✓ |
| (5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions. | | | ✓ |
| (6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii. | | ✓ | |
| (7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion. | | | ✓ |
| (8) Pursue compatible relationships among activities, facilities, and natural resources. | | ✓ | |
| (9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes. | | ✓ | |
| ***Analysis:*** **The proposed wastewater treatment and disposal upgrades project is indirectly applicable to the prudent use of Hawai'i's land-based resources to protect the land-based, shoreline, and marine resources. The treatment works and absorption field for the wastewater system will be located offsite and upland from the Helene Hall to ensure nearshore waters and groundwater resources are not adversely impacted by the project. In planning for the proposed project, biological resources inventory and assessment was carried out to ensure the project will not adversely impact rare and endangered species or their habitats. Implementation of the proposed action will allow the Helene Hall to be utilized to its full operating capacity as a community center without the potential for adverse impacts to marine waters.** | | | |
| **Chapter 226-12 Objective and policies for the physical environment – – scenic, natural beauty, and historic resources.** | | | |
| **Objective:** Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources. | | ✓ | |
| **Policies:** | | | |
| (1) Promote the preservation and restoration of significant natural and historic resources. | | ✓ | |
| (2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities. | | | ✓ |
| (3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features. | | ✓ | |
| (4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage. | | | ✓ |

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|---|---|---|---|
| (5) Encourage the design of developments and activities that complement the natural beauty of the islands. | | | ✓ |
| ***Analysis:*** **The proposed Helene Hall wastewater treatment and absorption field upgrades project is indirectly applicable to the objective of enhancement of Hawai‘i's scenic assets, natural beauty and multi-cultural/historic resources. In planning for the proposed project, the absorption field location was moved offsite and away from the shoreline area in order to protect the nearshore marine environment. The project components are primarily situated as subsurface operating elements and, therefore, there are no anticipated adverse impacts to scenic resources. As well, archaeological field inspection and cultural impact assessment were carried out on the proposed project to ensure protection of cultural and historic resources.** | | | |
| **Chapter 226-13 Objectives and policies for the physical environment – – land, air, and water quality.** | | | |
| **Objectives:** Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives. | | ✓ | |
| (1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources. | | ✓ | |
| (2) Greater public awareness and appreciation of Hawaii's environmental resources. | | ✓ | |
| **Policies:** | | | |
| (1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources. | | | ✓ |
| (2) Promote the proper management of Hawaii's land and water resources. | | ✓ | |
| (3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters. | | ✓ | |
| (4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people. | | | ✓ |
| (5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters. | | ✓ | |
| (6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities. | | ✓ | |
| (7) Encourage urban developments in close proximity to existing services and facilities. | | ✓ | |
| (8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors. | | ✓ | |

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| ***Analysis*: The proposed Helene Hall wastewater treatment upgrades project is indirectly applicable to the objectives and policies for the physical environment related to land, air, and water quality resources and greater public awareness and appreciation of Hawai‘i's environmental resources. The new wastewater treatment facility and absorption field will be located upslope at the Hāna Ball Park parking lot, approximately 0.25 mile away from the shoreline setback area and nearshore marine environment. An EA has been carried out on the proposed project to ensure adverse impacts to the physical environment are appropriately considered and mitigated. The EA and permitting requirements, including a Special Management Area Use Permit and Shoreline Setback Variance, will involve opportunities for the public to review and comment on the proposed project. In addition, a Best Management Practices (BMP) plan will be prepared for the proposed project to ensure water and air quality will not be adversely impacted during construction. The BMPs will include, but not limited to, temporary drainage basins and swales to prevent stormwater runoff from impacting downstream and adjacent properties, as well as dust fences to maintain air quality during construction. Further, a SSSPCP will be developed and approved prior to construction.** | | | |
| **Chapter 226-14 Objective and policies for facility systems – – in general.** | | | |
| **Objective**: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. | ✓ | | |
| **Policies**: | | | |
| (1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans. | ✓ | | |
| (2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities. | | | ✓ |
| (3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user. | ✓ | | |
| (4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems. | | | ✓ |
| ***Analysis:* The proposed project is directly applicable to planning for the State's facility systems that support statewide social, economic, and physical objectives. The proposed project will ensure the use of a commercial kitchen and wastewater services are available and operable at Helene Hall. When complete, the facility will be available for use by current and future generations. The proposed project represents a capital improvement project that is in consonance with State and County plans and will provide wastewater service that can be supported by resource capacity and at a reasonable cost to the user.** | | | |
| **Chapter 226-15 Objectives and policies for facility systems – – solid and liquid waste.** | | | |
| **Objectives**: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives: | | | |
| (1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes. | ✓ | | |

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| (2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas. | ✓ | | |
| **Policies:** | | | |
| (1) Encourage the adequate development of sewerage facilities that complement planned growth. | ✓ | | |
| (2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic. | ✓ | | |
| (3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes. | | | ✓ |
| ***Analysis:*** **The proposed Helene Hall wastewater upgrades project is directly applicable to the objectives and policies for liquid waste facility systems. The proposed project will improve the quality and operation of the wastewater treatment and disposal system at Helene Hall and the commercial kitchen.** | | | |
| **Chapter 226-16 Objective and policies for facility systems – – water.** | | | |
| **Objective:** Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities. | | | ✓ |
| **Policies:** | | | |
| (1) Coordinate development of land use activities with existing and potential water supply. | | | ✓ |
| (2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs. | | | ✓ |
| (3) Reclaim and encourage the productive use of runoff water and wastewater discharges. | | | ✓ |
| (4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use. | | | ✓ |
| (5) Support water supply services to areas experiencing critical water problems. | | | ✓ |
| (6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs. | | | ✓ |
| ***Analysis:*** **The proposed project at Helene Hall is not applicable to the objective and policies for facility development of water services.** | | | |
| **Chapter 226-17 Objectives and policies for facility systems – – transportation.** | | | |
| **Objectives:** Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives: | | | |
| (1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods. | | | ✓ |
| (2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State. | | | ✓ |

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| **Policies:** | | | |
| (1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter; | | | ✓ |
| (2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives; | | | ✓ |
| (3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties; | | | ✓ |
| (4) Provide for improved accessibility to shipping, docking, and storage facilities; | | | ✓ |
| (5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs; | | | ✓ |
| (6) Encourage transportation systems that serve to accommodate present and future development needs of communities; | | | ✓ |
| (7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods; | | | ✓ |
| (8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs; | | | ✓ |
| (9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification; | | | ✓ |
| (10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment; | | | ✓ |
| (11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation; | | | ✓ |
| (12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and | | | ✓ |
| (13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency. | | | ✓ |
| ***Analysis:*** **The proposed wastewater system upgrades at Helene Hall is not applicable to the objective and policies for facility development of transportation services.** | | | |
| **Chapter 226-18 Objectives and policies for facility systems – – energy.** | | | |
| **Objectives:** Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all: | | | |
| (1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people; | | | ✓ |
| (2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation. | | | ✓ |
| (3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems; | | | ✓ |
| (4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and | | | ✓ |

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| (5) Utility models that make the social and financial interests of Hawaii's utility customers a priority. | | | ✓ |
| (b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably prices, and dependable energy services to accommodate demand. | | | ✓ |
| (1) Support research and development as well as promote the use of renewable energy sources; | | | ✓ |
| (2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth; | | | ✓ |
| (3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits; | | | ✓ |
| (4) Promote all cost-effective conservation of power and fuel supplies through measures, including: | | | ✓ |
| (A) Development of cost-effective demand-side management programs; | | | ✓ |
| (B) Education; | | | ✓ |
| (C) Adoption of energy-efficient practices and technologies; and | | | ✓ |
| (D) Increasing energy efficiency and decreasing energy use in public infrastructure | | | ✓ |
| (5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies; and | | | ✓ |
| (6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies; | | | ✓ |
| (7) Promote alternate fuels and transportation energy efficiency; | | | ✓ |
| (8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications; | | | ✓ |
| (9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives; | | | ✓ |
| (10) Provide priority handling and processing for all state and county permits required for renewable energy projects; | | | ✓ |
| (11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and | | | ✓ |
| (12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii. | | | ✓ |

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| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is not applicable to the objectives and policies related to energy facility systems.** | | | |
| **Chapter 226-18.5 Objectives and policies for facility systems – – telecommunications.** | | | |
| **Objectives:** Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people. | | | |
| **Policies:** | | | |
| (b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand. | | | ✓ |
| (1) Facilitate research and development of telecommunications systems and resources; | | | ✓ |
| (2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning; | | | ✓ |
| (3) Promote efficient management and use of existing telecommunications systems and services; and | | | ✓ |
| (4) Facilitate the development of education and training of telecommunications personnel. | | | ✓ |
| ***Analysis:*** **The proposed wastewater system upgrades at Helene Hall is not applicable to the objectives and policies related to telecommunication systems.** | | | |
| **Chapter 226-19 Objectives and policies for socio-cultural advancement – – housing.** | | | |
| **Objectives:** Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives: | | | ✓ |
| (1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population. | | | ✓ |
| (2) The orderly development of residential areas sensitive to community needs and other land uses. | | | ✓ |
| (3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people. | | | ✓ |
| **Policies:** | | | |
| (1) Effectively accommodate the housing needs of Hawaii's people. | | | ✓ |
| (2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households. | | | ✓ |
| (3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing. | | | ✓ |
| (4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas. | | | ✓ |
| (5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas. | | | ✓ |

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| (6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing. | | | ✓ |
| (7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community. | | | ✓ |
| (8) Promote research and development of methods to reduce the cost of housing construction in Hawaii. | | | ✓ |
| ***Analysis:*** **The proposed wastewater system upgrades at Helene Hall is not applicable to the objectives and policies related to socio-cultural advancement of housing.** | | | |
| **Chapter 226-20 Objectives and policies for socio-cultural advancement – – health.** | | | |
| **Objectives:** Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives: | | | |
| (1) Fulfillment of basic individual health needs of the general public. | | ✓ | |
| (2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities. | ✓ | | |
| (3) Elimination of health disparities by identifying and addressing social determinants of health. | | | ✓ |
| **Policies:** | | | |
| (1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse. | | | ✓ |
| (2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State. | | | ✓ |
| (3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs. | | | ✓ |
| (4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures. | | | ✓ |
| (5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions. | ✓ | | |
| (6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement. | | | ✓ |
| (7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data. | | | ✓ |

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| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is directly and indirectly applicable to the objectives and policies related to socio-cultural advancement related to health. The current wastewater treatment system at Helene Hall is not functioning properly and disposal is reliant on a cesspool. The proposed wastewater upgrades will ensure sanitary conditions are maintained and health standards are met at Helene Hall and the commercial kitchen.** | | | |
| **Chapter 226-21 Objectives and policies for Socio-cultural advancement – – education.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations. | | | ✓ |
| **Policies:** | | | |
| (1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups. | | | ✓ |
| (2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs. | | | ✓ |
| (3) Provide appropriate educational opportunities for groups with special needs. | | | ✓ |
| (4) Promote educational programs which enhance understanding of Hawaii's cultural heritage. | | | ✓ |
| (5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands. | | | ✓ |
| (6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities. | | | ✓ |
| (7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning. | | | ✓ |
| (8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence. | | | ✓ |
| (9) Support research programs and activities that enhance the education programs of the State. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at Helene Hall and is not applicable to the objectives and policies related to socio-cultural advancement for education.** | | | |
| **Chapter 226-22 Objective and policies for socio-cultural advancement – – social services.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being. | | | ✓ |
| **Policies:** | | | |
| (1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities. | | | ✓ |

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| (2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society. | | | ✓ |
| (3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities. | | | ✓ |
| (4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations. | | | ✓ |
| (5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect. | | | ✓ |
| (6) Promote programs which assist people in need of family planning services to enable them to meet their needs. | | | ✓ |
| ***Analysis:*** **The proposed action is not applicable to the objectives and policies related to the socio-cultural advancement of social services.** | | | |
| **Chapter 226-23 Objective and policies for socio-cultural advancement – – leisure.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations. | ✓ | | |
| **Policies:** | | | |
| (1) Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities. | | | ✓ |
| (2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently. | ✓ | | |
| (3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance. | ✓ | | |
| (4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved. | | | ✓ |
| (5) Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources. | ✓ | | ✓ |
| (6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs. | ✓ | | ✓ |
| (7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people. | | | ✓ |
| (8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms. | ✓ | | |
| (9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts. | | | ✓ |
| (10) Assure adequate access to significant natural and cultural resources in public ownership. | | | ✓ |

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| ***Analysis:*** **The proposed wastewater system upgrades project at Helene Hall is directly applicable to the objectives and policies for socio-cultural advancement related to leisure. The proposed project ensures Helene Hall and the commercial kitchen will be well maintained and provide a sanitary community/recreational facility for current residents, visitors, and future generations.** | | | |
| **Chapter 226-24 Objective and policies for socio-cultural advancement – – individual rights and personal well-being.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. | | | ✓ |
| **Policies:** | | | |
| (1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment. | | | ✓ |
| (2) Uphold and protect the national and state constitutional rights of every individual. | | | ✓ |
| (3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice. | | | ✓ |
| (4) Ensure equal opportunities for individual participation in society. | | | ✓ |
| ***Analysis:*** **The proposed action at Helene Hall is not directly or indirectly applicable to the objectives and policies for socio-cultural advancement related to individual rights and personal well-being.** | | | |
| **Chapter 226-25 Objective and policies for socio-cultural advancement – – culture.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people. | | ✓ | |
| **Policies:** | | | |
| (1) Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii. | | | ✓ |
| (2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs. | | ✓ | |
| (3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii. | | | ✓ |
| (4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is indirectly applicable to the objectives and policies related to socio-cultural advancement of culture. Helene Hall and the commercial kitchen provides a social gathering place to promote cultural values, customs and arts, and community lifestyles in Hāna.** | | | |

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| **Chapter 226-26 Objectives and policies for socio-cultural advancement – – public safety.** | | | |
| **Objective:** Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives: | | | |
| (1) Assurance of public safety and adequate protection of life and property for all people. | | | ✓ |
| (2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances. | | | ✓ |
| (3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people. | | | ✓ |
| **Policies (Public Safety):** | | | |
| (1) Ensure that public safety programs are effective and responsive to community needs. | | | ✓ |
| (2) Encourage increased community awareness and participation in public safety programs. | | | ✓ |
| **Policies (Public Safety-Criminal Justice):** | | | |
| (1) Support criminal justice programs aimed at preventing and curtailing criminal activities. | | | ✓ |
| (2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies. | | | ✓ |
| (3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community. | | | ✓ |
| **Policies (Public Safety – Emergency Management):** | | | |
| (1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times. | | | ✓ |
| (2) Enhance the coordination between emergency management programs throughout the State. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is not applicable to the objectives and policies related to socio-cultural advancement of public safety.** | | | |
| **Chapter 226-27 Objectives and policies for socio-cultural advancement – – government.** | | | |
| **Objectives:** Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives: | | | |
| (1) Efficient, effective, and responsive government services at all levels in the State. | ✓ | | |
| (2) Fiscal integrity, responsibility, and efficiency in the state government and county governments. | ✓ | | |

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| **Policies:** | | | |
| (1) Provide for necessary public goods and services not assumed by the private sector. | ✓ | | |
| (2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response. | ✓ | | |
| (3) Minimize the size of government to that necessary to be effective. | | | ✓ |
| (4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaii. | | | ✓ |
| (5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns. | ✓ | | |
| (6) Provide for a balanced fiscal budget. | | | ✓ |
| (7) Improve the fiscal budgeting and management system of the State. | | | ✓ |
| (8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible. | | | ✓ |
| ***Analysis:*** **The proposed wastewater system upgrades project at Helene Hall is directly applicable to the socio-cultural advancement related to government. The proposed project encompasses an efficient, effective, and responsive government service involving provision of sanitary conditions and standards at the Helene Hall community facility. The proposed project will ensure adequate and safe wastewater service is available at Helene Hall.** | | | |

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| **Chapter 226-101: Purpose.** The purpose of this part is to establish overall priority guidelines to address areas of statewide concern. | | | |
| **Chapter 226-102: Overall direction.** The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation. | | | |
| **Chapter 226-103: Economic priority guidelines.** | | | |
| **(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy:** | | | |
| (1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises. | | | ✓ |
| (A) Encourage investments which: | | | ✓ |
| (i) Reflect long term commitments to the State; | | | ✓ |
| (ii) Rely on economic linkages within the local economy; | | | ✓ |
| (iii) Diversify the economy; | | | ✓ |

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| (iv) Reinvest in the local economy; | | | ✓ |
| (v) Are sensitive to community needs and priorities; and | | | ✓ |
| (vi) Demonstrate a commitment to provide management opportunities to Hawaii residents; and | | | ✓ |
| (B) Encourage investments in innovative activities that have a nexus to the State, such as: | | | ✓ |
| (i) Present or former residents acting as entrepreneurs or principals; | | | ✓ |
| (ii) Academic support from an institution of higher education in Hawaii; | | | ✓ |
| (iii) Investment interest from Hawaii residents; | | | ✓ |
| (iv) Resources unique to Hawaii that are required for innovative activity; and | | | ✓ |
| (v) Complementary or supportive industries or government programs or projects. | | | ✓ |
| (2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements. | | | ✓ |
| (3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations. | | | ✓ |
| (4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable. | | | ✓ |
| (5) Streamline the processes for building and development permit and review, and telecommunication infrastructure installation approval and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety and welfare would not be adversely affected. | | | ✓ |
| (6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaii's small-scale producers, manufacturers, and distributors. | | | ✓ |
| (7) Continue to seek legislation to protect Hawaii from transportation interruptions between Hawaii and the continental United States. | | | ✓ |
| (8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics: | | | ✓ |
| (A) An industry that can take advantage of Hawaii's unique location and available physical and human resources. | | | ✓ |
| (B) A clean industry that would have minimal adverse effects on Hawaii's environment. | | | ✓ |
| (C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment. | | | ✓ |
| (D) An industry that would provide reasonable income and steady employment. | | | ✓ |
| (9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaii business. | | | ✓ |
| (10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions: | | | ✓ |

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| (A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible. | | | ✓ |
| (B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities. | | | ✓ |
| (C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired. | | | ✓ |
| (D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents. | | | ✓ |
| (E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities. | | | ✓ |
| (F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment. | | | ✓ |
| **(b) Priority guidelines to promote the economic health and quality of the visitor industry:** | | | |
| (1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors. | | | ✓ |
| (2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access. | | | ✓ |
| (3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities. | | | ✓ |
| (4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources. | | | ✓ |
| (5) Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions. | | | ✓ |
| (6) Support and coordinate tourism promotion abroad to enhance Hawaii's share of existing and potential visitor markets. | | | ✓ |
| (7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter. | | | ✓ |
| (8) Support law enforcement activities that provide a safer environment for both visitors and residents alike. | | | ✓ |
| (9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques. | | | ✓ |
| **(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:** | | | |
| (1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries. | | | ✓ |
| (2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaii. | | | ✓ |
| (3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops. | | | ✓ |

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| **(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:** | | | |
| (1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands. | | | ✓ |
| (2) Assist in providing adequate, reasonably priced water for agricultural activities. | | | ✓ |
| (3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture. | | | ✓ |
| (4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs. | | | ✓ |
| (5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaii's agricultural community. | | | ✓ |
| (6) Seek favorable freight rates for Hawaii's agricultural products from interisland and overseas transportation operators. | | | ✓ |
| (7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities. | | | ✓ |
| (8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans. | | | ✓ |
| (9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions. | | | ✓ |
| (10) Support the continuation of land currently in use for diversified agriculture. | | | ✓ |
| (11) Encourage residents and visitors to support Hawaii's farmers by purchasing locally grown food and food products. | | | ✓ |
| **(e) Priority guidelines for water use and development:** | | | |
| (1) Maintain and improve water conservation programs to reduce the overall water consumption rate. | | | ✓ |
| (2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes. | | | ✓ |
| (3) Increase the support for research and development of economically feasible alternative water sources. | | | ✓ |
| (4) Explore alternative funding sources and approaches to support future water development programs and water system improvements. | | | ✓ |
| **(f) Priority guidelines for energy use and development:** | | | |
| (1) Encourage the development, demonstration, and commercialization of renewable energy sources. | | | ✓ |
| (2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy. | | | ✓ |
| (3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings. | | | ✓ |
| (4) Encourage the development and use of energy conserving and cost-efficient transportation systems. | | | ✓ |

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|---|---|---|---|
| **(g) Priority guidelines to promote the development of the information industry:** | | | |
| (1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii. | | | ✓ |
| (2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center. | | | ✓ |
| (3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals, and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services. | | | ✓ |
| (4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields. | | | ✓ |
| (5) Encourage research activities, including legal research in the information and telecommunications fields. | | | ✓ |
| (6) Support promotional activities to market Hawaii's information industry services. | | | ✓ |
| (7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected. | | | ✓ |
| ***Analysis:*** **The proposed project involves improvements to the Helene Hall wastewater system, including the conveyance of effluent via a 1.5 in. force main to the Hāna Ball Park parking lot for treatment and leach field disposal. The scope of these improvements is not applicable to the economic priority guidelines set forth in HRS 226-103. Nevertheless, in the short term, the proposed project will support construction jobs and material suppliers.** | | | |
| **Chapter 226-104: Population growth and land resources priority guidelines.** | | | |
| **(a) Priority guidelines to effect desired statewide growth and distribution:** | | | |
| (1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people. | | | ✓ |
| (2) Manage a growth rate for Hawaii's economy that will parallel future employment needs for Hawaii's people. | | | ✓ |
| (3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State. | | | ✓ |
| (4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate. | | | ✓ |
| (5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands. | | | ✓ |
| (6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands. | | | ✓ |
| (7) Support the development of high technology parks on the neighbor islands. | | | ✓ |

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|---|---|---|---|
| **(b) Priority guidelines for regional growth distribution and land resource utilization:** | | | |
| (1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles. | | | ✓ |
| (2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district. | | | ✓ |
| (3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area. | | | ✓ |
| (4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use. | | | ✓ |
| (5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core. | | | ✓ |
| (6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces. | | | ✓ |
| (7) Pursue rehabilitation of appropriate urban areas. | | | ✓ |
| (8) Support the redevelopment of Kakaako into a viable residential, industrial, and commercial community. | | | ✓ |
| (9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized. | | | ✓ |
| (10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources. | | | ✓ |
| (11) Identify all areas where priority should be given to preserving rural character and lifestyle. | | | ✓ |
| (12) Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations. | | ✓ | |
| (13) Protect and enhance Hawaii's shoreline, open spaces, and scenic resources. | | ✓ | |
| ***Analysis:*** **The proposed wastewater system upgrades project at Helene Hall is indirectly applicable to the land resource utilization priority guidelines set forth in HRS 226-104. The wastewater treatment facility and absorption field will be located offsite at the Hāna Ball Park parking lot approximately 0.25 mile from the shoreline in order to protect the nearshore marine environment. The proposed project is also indirectly applicable to the objective of protecting Hawai'i's shoreline, open spaces, and scenic resources. Completion of the project will eliminate potential threats of spillage from the existing system, which in turn, advances policies for protecting shoreline areas.** | | | |

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|---|---|---|---|
| **Chapter 226-105: Crime and criminal justice.** | | | |
| **Priority guidelines in the area of crime and criminal justice**: | | | |
| (1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment. | | | ✓ |
| (2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders. | | | ✓ |
| (3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities. | | | ✓ |
| (4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community. | | | ✓ |
| (5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions. | | | ✓ |
| (6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is not applicable to the crime and criminal justice priority guidelines set forth in HRS 226-105.** | | | |
| **Chapter 226-106: Affordable housing.** | | | |
| **Priority guidelines for the provision of affordable housing:** | | | |
| (1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households. | | | ✓ |
| (2) Encourage the use of alternative construction and development methods as a means of reducing production costs. | | | ✓ |
| (3) Improve information and analysis relative to land availability and suitability for housing. | | | ✓ |
| (4) Create incentives for development which would increase home ownership and rental opportunities for Hawaii's low- and moderate-income households, gap-group households, and residents with special needs. | | | ✓ |
| (5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaii's people for the purchase of initial owner-occupied housing. | | | ✓ |
| (6) Encourage public and private sector cooperation in the development of rental housing alternatives. | | | ✓ |
| (7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations. | | | ✓ |
| (8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is not applicable to the affordable housing priority guidelines set forth in HRS 227-106.** | | | |
| **Chapter 226-107: Quality education.** | | | |
| **Priority guidelines to promote quality education:** | | | |
| (1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement; | | | ✓ |
| (2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs; | | | ✓ |

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|---|---|---|---|
| (3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force; | | | ✓ |
| (4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision making responsibilities; | | | ✓ |
| (5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for: | | | ✓ |
| (A) The electronic exchange of information; | | | ✓ |
| (B) Statewide electronic mail; and | | | ✓ |
| (C) Access to the Internet. | | | ✓ |
| (6) Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives; | | | ✓ |
| (7) Pursue the establishment of Hawaii’s public and private universities and colleges as research and training centers of the Pacific; | | | ✓ |
| (8) Develop resources and programs for early childhood education; | | | ✓ |
| (9) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and | | | ✓ |
| (10) Strengthen and expand educational programs and services for students with special needs. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at Helene Hall and is not applicable to the quality education priority guidelines set forth in HRS 226-107.** | | | |
| **CHAPTER 226-108: Sustainability** | | | |
| **Priority guidelines and principles to promote sustainability shall include:** | | | |
| (1) Encouraging balanced economic, social, community, and environmental priorities; | | | ✓ |
| (2) Encouraging planning that respects and promotes living within the natural resources and limits of the State; | | ✓ | |
| (3) Promoting a diversified and dynamic economy; | | | ✓ |
| (4) Encouraging respect for the host culture; | | | ✓ |
| (5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations; | | | ✓ |
| (6) Considering the principles of the ahupua‘a system; and | | | ✓ |
| (7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii. | | | ✓ |
| ***Analysis:*** **The proposed action recognizes the need to provide a safe and functional wastewater treatment and disposal system for Helene Hall. By so doing, the action provides measures which protect Hāna Ball Park parking lot and is adjacent to marine waters. The action, therefore, indirectly promotes living within the natural resources limits of the State.** | | | |
| **CHAPTER 226-109: Climate change adaptation** | | | |
| **Priority guidelines and principles to promote climate change adaptation shall include:** | | | |
| (1) Ensure that Hawaii’s people are educated, informed, and aware of the impacts climate change may have on their communities; | | | ✓ |
| (2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies; | | | ✓ |
| (3) Invest in continued monitoring and research of Hawaii’s climate and the impacts of climate change on the State; | | | ✓ |

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|---|---|---|---|
| (4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change; | | | ✓ |
| (5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change; | | | ✓ |
| (6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments; | | | ✓ |
| (7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options; | | | ✓ |
| (8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities; | | | ✓ |
| (9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and | | | ✓ |
| (10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy. | | ✓ | |
| ***Analysis:*** **The proposed project is indirectly applicable to the climate change adaptation priority guidelines. A sea level rise analysis was carried out and the proposed wastewater treatment facility and absorption field were relocated offsite from the Helene Hall site to the Hāna Ball Park parking lot. It is noted that Helene Hall and Keawa Place, the two (2) properties closest to the ocean and, therefore, at greatest risk of sea level rise impacts, are completely out of the 3.2-foot sea level rise exposure area.** | | | |

# ANALYSIS OF THE PROJECT'S CONFORMANCE WITH THE COUNTYWIDE POLICY PLAN

## APPENDIX

# F-2

# APPENDIX F-2

## Analysis of Project Applicability to Countywide Policy Plan

The Countywide Policy Plan was adopted in March 2010 and is a comprehensive policy document for the islands of Maui County to the year 2030. The plan replaces the *General Plan of the County of Maui 1990 Update* and provides the policy framework for the development of the forthcoming Maui Island Plan as well as for updating the nine detailed Community Plans.

The Countywide Policy Plan provides broad goals, objectives, policies and implementing actions that portray the desired direction of the County's future. Goals are intended to describe a desirable condition of the County by the year 2030 and are intentionally general. Objectives tend to be more specific and may be regarded as milestones to achieve the larger goals. Policies are not intended as regulations, but instead provide a general guideline for County decision makers, departments, and collaborating organizations toward the attainment of goals and objectives. Implementing actions are specific tasks, procedures, programs, or techniques that carry out policy.

Discussion of the proposed project conforms to the relevant goals, objectives, policies, and implementing actions of the Countywide Policy Plan is provided below. The methodology for assessing a project's relationship to the Countywide Policy Plan involves examining the project's applicability to the Plan's goals, objectives, and policies. "Applicability" refers to a project's need, purpose and effects, and how they advance or promote a particular set of goals, objectives and policies. In assessing the relationship between a proposed action and the Countywide Policy Plan, an action may be categorized in one of the following groups:

1. **Directly applicable:** the action and its potential effects directly advances, promotes or affects the relevant goal, objective, or policy.

   **Example:** A County project to develop a new water source and related transmission facilities would be directly applicable to improving physical infrastructure. The relevant objective states: *"Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water*" (Objective I.1). A policy within this objective category states: *Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents* (Policy I.1.a).

   In this instance, the proposed action is considered to be directly applicable to the cited objective and policy.

2. **Indirectly applicable:** the action and its potential effects indirectly supports, advances or affects the objective, policy or priority guideline.

   **Example:** The county water source project cited above supports the objective to: *"Improve land use management and implement a directed-growth strategy"* (Objective J.1). A related policy encompassed by this objective states: *"Direct new development in*

*and around communities with existing infrastructure and service capacity, and protect natural, scenic, shoreline, and cultural resources"* (Policy J.1.h). In this case, the principle purpose of the project is not to create source specifically intended to improve land use management. Nonetheless, the proposed action indirectly supports the Countywide Policy Plan's directives relating to appropriate locations for new development.

3. **Not applicable:** the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Countywide Policy Plan.

**Example:** The county water source improvement project referenced above, may not have direct or indirect linkage to Objective D.1, which states: *"In cooperation with the Federal and State governments and nonprofit agencies, broaden access to social and healthcare services and expand options to improve the overall wellness of the people of Maui County"*. Hence, from a policy analysis and linkage standpoint, the proposed action would be considered not applicable to this set of objectives and policies.

It is recognized that policy analysis is subject to interpretation and is best considered in the context of the proposed action's local and regional conditions.

| COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **A. PROTECT THE NATURAL ENVIRONMENT** | | | |
| **Goal:** Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity. | | ✓ | |
| **Objective:** | | | |
| (1) Improve the opportunity to experience the natural beauty and native biodiversity of the islands for present and future generations. | | ✓ | |
| **Policies:** | | | |
| (a) Perpetuate native Hawaiian biodiversity by preventing the introduction of invasive species, containing or eliminating existing noxious pests, and protecting critical habitat areas. | | | ✓ |
| (b) Preserve and reestablish indigenous and endemic species' habitats and their connectivity. | | | ✓ |
| (c) Restore and protect forests, wetlands, watersheds, and stream flows, and guard against wildfires, flooding, and erosion. | | | ✓ |
| (d) Protect baseline stream flows for perennial streams, and support policies that ensure adequate stream flow to support Native Hawaiian aquatic species, traditional kalo cultivation, and self-sustaining ahupuaʻa. | | | ✓ |
| (e) Protect undeveloped beaches, dunes, and coastal ecosystems, and restore natural shoreline processes. | | ✓ | |
| (f) Protect the natural state and integrity of unique terrain, valued natural environments, and geological features. | | | ✓ |
| (g) Preserve and provide ongoing care for important scenic vistas, view planes, landscapes, and open-space resources. | | | ✓ |
| (h) Expand coordination with the State and nonprofit agencies and their volunteers to reduce invasive species, replant indigenous species, and identify critical habitat. | | | ✓ |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **Implementing Actions:** | | | |
| (a) Develop island-wide networks of greenways, watercourses, and habitat corridors. | | | ✓ |
| **The proposed new wastewater system will replace two (2) aerobic treatment units and a cesspool which are not functional. The new treatment facility and absorption field will be relocated offsite to the Hāna Ball Park to protect the shoreline and nearshore marine environment. This action will help to protect coastal ecosystems which may otherwise be adversely affected by the existing system configuration.** | | | |
| **Objective:** | | | |
| (2) Improve the quality of environmentally sensitive, locally valued natural resources and native ecology of each island. | | ✓ | |
| **Policies:** | | | |
| (a) Protect and restore nearshore reef environments and water quality. | | ✓ | |
| (b) Protect marine resources and valued wildlife. | | ✓ | |
| (c) Improve the connection between urban environments and the natural landscape, and incorporate natural features of the land into urban design. | | | ✓ |
| (d) Utilize land-conservation tools to ensure the permanence of valued open spaces. | | | ✓ |
| (e) Mitigate the negative effects of upland uses on coastal wetlands, marine life, and coral reefs. | | ✓ | |
| (f) Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff. | | | ✓ |
| (g) Regulate the use and maintenance of stormwater-treatment systems that incorporate the use of native vegetation and mimic natural systems. | | | ✓ |
| (h) Advocate for stronger regulation of fishing, boating, cruise ship, and ecotourism activities. | | | ✓ |
| (i) Restore watersheds and aquifer-recharge areas to healthy and productive status, and increase public knowledge about the importance of watershed stewardship, water conservation, and groundwater protection. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop regulations to minimize runoff of pollutants into nearshore waters and reduce nonpoint and point source pollution. | | | ✓ |
| ***Analysis:*** **As noted above, the proposed treatment facility and absorption field have been relocated offsite to the Hāna Ball Park, approximately 0.25 mile upslope and away from the shoreline area to protect nearshore marine environment. System operating protection and hence, natural resources protection, is also provided by moving the wastewater treatment and disposal elements away from coastal hazards.** | | | |
| **Objective:** | | | |
| (3) Improve the stewardship of the natural environment. | | ✓ | |
| **Policies:** | | | |
| (a) Preserve and protect natural resources with significant scenic, economic, cultural, environmental, or recreational value. | | ✓ | |
| (b) Improve communication, coordination, and collaboration among government agencies, nonprofit organizations, communities, individuals, and land owners that work for the protection of the natural environment. | | | ✓ |
| (c) Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments. | | ✓ | |
| (d) Improve efforts to mitigate and plan for the impact of natural disasters, human influenced emergencies, and global warming. | | ✓ | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (e) Regulate access to sensitive ecological sites and landscapes. | | | ✓ |
| (f) Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change. | | | ✓ |
| (g) Plan and prepare for and educate visitors and residents about the possible effects of global warming. | | | ✓ |
| (h) Provide public access to beaches and shorelines for recreational and cultural purposes where appropriate. | | ✓ | |
| (i) Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution. | | ✓ | |
| (j) Support the acquisition of resources with scenic, environmental, and recreational value, and encumber their use. | | | ✓ |
| (k) Improve enforcement activities relating to the natural environment. | | | ✓ |
| (l) For each shoreline community, identify and prioritize beach-conservation objectives, and develop action plans for their implementation. | | | ✓ |
| **Implementing Actions:** | | | ✓ |
| (a) Document, record, and monitor existing conditions, populations, and locations of flora and fauna communities. | | ✓ | |
| (b) Implement Federal and State policies that require a reduction of greenhouse-gas emissions. | | | ✓ |
| (c) Establish a baseline inventory of available natural resources and their respective carrying capacities. | | | ✓ |
| ***Analysis:*** **The proposed project is indirectly applicable to the objective and policies to improve stewardship of the natural environment. An environmental assessment (EA) of the proposed project will be carried out to ensure the proposed project considers and mitigates associated impacts. A component of the EA will be a flora and fauna assessment to ensure sensitive species and habitats are not adversely impacted. The proposed project will relocate the wastewater treatment facility and disposal field out of the shoreline area and outside the area of potential coastal hazards. The proposed project will also ensure that the recreational and cultural value of Helene Hall will be available for present and future generations.** | | | |
| **Objective:** | | | |
| (4) Educate residents and visitors about responsible stewardship practices and the interconnectedness of the natural environment and people. | | ✓ | |
| **Policies:** | | | |
| (a) Expand education about native flora, fauna, and ecosystems. | | ✓ | |
| (b) Align priorities to recognize that the health of the natural environment and the health of people are inextricably linked. | | ✓ | |
| (c) Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is indirectly applicable to the objective and policies to educate residents and visitors about responsible stewardship practices and interconnectedness of the natural environment and people. The proposed project will undergo public review of the Draft EA and public hearing during the SMA Use Permit process. A biological resources survey has been completed and serves to educate the public about measures to avoid or mitigate impacts to the native flora and fauna. The proposed project replaces an existing system which no longer provides effective wastewater treatment processes. Accordingly, the action aligns priorities for the County to recognize the natural environment and health of people are inextricably linked.** | | | |

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|---|---|---|---|
| **B. PRESERVE LOCAL CULTURES AND TRADITIONS** | | | |
| **Goal:** Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents" multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage. | | ✓ | |
| **Objective:** | | | |
| (1) Perpetuate the Hawaiian culture as a vital force in the lives of residents. | | ✓ | |
| **Policies:** | | | |
| (a) Protect and preserve access to mountain, ocean, and island resources for traditional Hawaiian cultural practices. | | ✓ | |
| (b) Prohibit inappropriate development of cultural lands and sites that are important for traditional Hawaiian cultural practices, and establish mandates for the special protection of these lands in perpetuity. | | ✓ | |
| (c) Promote the use of ahupuaʻa and moku management practices. | | | ✓ |
| (d) Encourage the use of traditional Hawaiian architecture and craftsmanship. | | | ✓ |
| (e) Promote the use of the Hawaiian language. | | | ✓ |
| (f) Recognize and preserve the unique natural and cultural characteristics of each ahupuaʻa or district. | | ✓ | |
| (g) Encourage schools to promote broader incorporation of Hawaiian and other local cultures' history and values lessons into curriculum. | | | ✓ |
| (h) Ensure the protection of Native Hawaiian rights. | | ✓ | |
| (i) Promote, encourage, and require the correct use of traditional place names, particularly in government documents, signage, and the tourism industry. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Establish alternative land use and overlay zoning designations that recognize and preserve the unique natural and cultural characteristics of each ahupuaʻa or district. | | | ✓ |
| (b) Develop requirements for all County applicants to perpetuate and use proper traditional place names in all applications submitted. | | | ✓ |
| **The proposed project involves wastewater system upgrades at the Helene Hall and is indirectly applicable to the goal, objective, and policies to preserve local culture and traditions. Helene Hall is a gathering place that houses community functions for the residents of Hāna. The proposed improvements will ensure Helene Hall is an available facility to host local cultural events for current and future residents of Hāna. As previously noted, an archaeological investigation and a Cultural Impact Assessment have been carried out to ensure the protection and preservation of resources and cultural values and practices which are part of the Native Hawaiian tradition.** | | | |
| **Objective:** | | | |
| (2) Emphasize respect for our island lifestyle and our unique local cultures, family, and natural environment. | | ✓ | |
| **Policies:** | | | |
| (a) Acknowledge the Hawaiian culture as the host culture, and foster respect and humility among residents and visitors toward the Hawaiian people and their practices. | | | ✓ |
| (b) Perpetuate a respect for diversity, and recognize the historic blending of cultures and ethnicities. | | | ✓ |
| (c) Encourage the perpetuation of each culture's unique cuisine, attire, dance, music, and folklore, and other unique island traditions and recreational activities. | | ✓ | |

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|---|---|---|---|
| (d) Recognize the interconnectedness between the natural environment and the cultural heritage of the islands. | | | ✓ |
| (e) Protect and prioritize funding for recreational activities that support local cultural practices, such as surfing, fishing, and outrigger-canoe paddling. | | | ✓ |
| ***Analysis:*** **The proposed project will ensure Helene Hall will be available to host future community activities that support local cultural practices and gatherings. Such gatherings are an integral part of Hāna's unique cultural and family lifestyle.** | | | |
| **Objective:** | | | |
| (3) Preserve for present and future generations the opportunity to know and experience the arts, culture, and history of Maui County. | | ✓ | |
| **Policies:** | | | |
| (a) Foster teaching opportunities for cultural practitioners to share their knowledge and skills. | | ✓ | |
| (b) Support the development of cultural centers. | | ✓ | |
| (c) Broaden opportunities for public art and the display of local artwork. | | ✓ | |
| (d) Foster the Aloha Spirit by celebrating the Hawaiian host culture and other Maui County cultures through support of cultural-education programs, festivals, celebrations, and ceremonies. | | ✓ | |
| (e) Support the perpetuation of Hawaiian arts and culture. | | ✓ | |
| (f) Support programs and activities that record the oral and pictorial history of residents. | | ✓ | |
| (g) Support the development of repositories for culture, history, genealogy, oral history, film, and interactive learning. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Establish incentives for the display of public art. | | | ✓ |
| (b) Establish centers and programs of excellence for the perpetuation of Hawaiian arts and culture. | | ✓ | |
| ***Analysis:*** **The proposed project is indirectly applicable to the goal, objective, and policies to preserve for present and future generations the opportunity to know and experience the arts, culture and history of Maui. Helene Hall houses many local cultural events and gatherings. The proposed project will ensure that the facility will be functional and available for current and future residents.** | | | |
| **Objective:** | | | |
| (4) Preserve and restore significant historic architecture, structures, cultural sites, cultural districts, and cultural landscapes. | | ✓ | |
| **Policies:** | | | |
| (a) Support the development of island-wide historic, archaeological, and cultural resources inventories. | | ✓ | |
| (b) Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures to perpetuate a traditional sense of place. | | | ✓ |
| (c) Identify a sustainable rate of use and set forth specific policies to protect cultural resources. | | | ✓ |
| (d) Protect and preserve lands that are culturally or historically significant. | | ✓ | |
| (e) Support programs that protect, record, restore, maintain, provide education about, and interpret cultural districts, landscapes, sites, and artifacts in both natural and museum settings. | | | ✓ |
| (f) Perpetuate the authentic character and historic integrity of rural communities and small towns. | | | ✓ |

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|---|---|---|---|
| (g) Seek solutions that honor the traditions and practices of the host culture while recognizing the needs of the community. | | | ✓ |
| (h) Support the development of an Archaeological District Ordinance. | | | ✓ |
| (i) Protect summits, slopes, and ridgelines from inappropriate development. | | | ✓ |
| (j) Support the registering of important historic sites on the State and Federal historic registers. | | | ✓ |
| (k) Provide opportunities for public involvement with restoration and enhancement of all types of cultural resources. | | | ✓ |
| (l) Foster partnerships to identify and preserve or revitalize historic and cultural sites. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Identify, develop, map, and maintain an inventory of locally significant natural. cultural, and historical resources for protection. | | ✓ | |
| (b) Prepare, continually update, and implement a cultural-management plan for cultural sites, districts, and landscapes, where appropriate. | | | ✓ |
| (c) Enact an Archaeological District Ordinance. | | | ✓ |
| (d) Nominate important historic sites to the State and Federal historic registers. | | | ✓ |
| ***Analysis:*** **An Archaeological Field Inspection and Cultural Impact Assessment have been carried out on the proposed project to ensure historic and cultural resources are not adversely impacted by the proposed action.** | | | |
| **C. IMPROVE EDUCATION** | | | |
| **Goal:** Residents will have access to lifelong formal and informal educational options enabling them to realize their ambitions. | | | ✓ |
| **Objective:** | | | |
| (1) Encourage the State to attract and retain school administrators and educators of the highest quality. | | | ✓ |
| **Policies:** | | | |
| (a) Encourage the State to provide teachers with nationally competitive pay and benefit packages. | | | ✓ |
| (b) Encourage the State to ensure teachers will have the teaching tools and support staff needed to provide students with an excellent education. | | | ✓ |
| (c) Explore Maui County district- and school-based decision making in public education. | | | ✓ |
| ***Analysis:*** **The proposed action is not applicable to the objective of attracting and retaining administrators and educators of the highest quality.** | | | |
| **Objective:** | | | |
| (2) Provide nurturing learning environments that build skills for the 21st century. | | | ✓ |
| **Policies:** | | | |
| (a) Expand professional-development opportunities in disciplines that support the economic-development goals of Maui County. | | | ✓ |
| (b) Plan for demographic, social, and technological changes in a timely manner. | | | ✓ |
| (c) Encourage collaborative partnerships to improve conditions of learning environments. | | | ✓ |
| (d) Promote development of neighborhood schools and educational centers. | | | ✓ |
| (e) Integrate schools, community parks, and playgrounds, and expand each community's use of these facilities. | | | ✓ |

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|---|---|---|---|
| (f) Support coordination between land use and school-facility planning agencies. | | | ✓ |
| (g) Encourage the upgrade and ongoing maintenance of public-school facilities. | | | ✓ |
| (h) Encourage the State Department of Education to seek reliable, innovative, and alternative methods to support a level of per-pupil funding that places Hawai‘i among the top tier of states nationally for its financial support of public schools. | | | ✓ |
| (i) Encourage the State to promote healthier, more productive learning environments, including by providing healthy meals, more physical activity, natural lighting, and passive cooling. | | | ✓ |
| (j) Encourage the State to support the development of benchmarks to measure the success of Hawai‘i's public-education system and clarify lines of accountability. | | | ✓ |
| (k) Design school and park facilities in proximity to residential areas. | | | ✓ |
| (l) Support technology- and natural-environment-based learning. | | | ✓ |
| (m) Encourage the State to support lower student-teacher ratios in public schools. | | | ✓ |
| (n) Encourage alternative learning and educational opportunities. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop safe walking and bicycling programs for school children. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective of nurturing learning environments.** | | | |
| **Objective:** | | | |
| (3) Provide all residents with educational opportunities that can help them better understand themselves and their surroundings and allow them to realize their ambitions. | | | ✓ |
| **Policies:** | | | |
| (a) Encourage the State to improve Maui Community College as a comprehensive community college that will serve each community. | | | ✓ |
| (b) Broaden the use of technology and telecommunications to improve educational opportunities throughout the County. | | | ✓ |
| (c) Attract graduate-level research programs and institutions. | | | ✓ |
| (d) Promote the teaching of traditional practices, including aquaculture; subsistence agriculture; Pacific Island, Asian, and other forms of alternative health practices; and indigenous Hawaiian architecture. | | | ✓ |
| (e) Integrate cultural and environmental values in education, including self-sufficiency and sustainability. | | | ✓ |
| (f) Foster a partnership and ongoing dialogue between business organizations, formal educational institutions, and vocational training centers to tailor learning and mentoring programs to County needs. | | | ✓ |
| (g) Ensure teaching of the arts to all ages. | | | ✓ |
| (h) Expand and develop vocational learning opportunities by establishing trade schools. | | | ✓ |
| (i) Encourage the State to integrate financial and economic literacy in elementary, secondary, and higher-education levels. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Encourage the State to establish a four-year university, and support the development of other higher-education institutions to enable residents to obtain bachelor degrees and postgraduate degrees in Maui County. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective and policies to provide all residents access to educational opportunities to help them achieve their ambitions.** | | | |
| **Objective:** | | | |
| (4) Maximize community-based educational opportunities. | | | ✓ |
| **Policies:** | | | |
| (a) Encourage the State and others to expand pre-school, after-school, and homebased (parent-child) learning. | | | ✓ |
| (b) Support public-private partnerships to develop youth-internship, -apprenticeship, and -mentoring programs. | | | ✓ |
| (c) Support the development of a wide range of informal educational and cultural programs for all residents. | | | ✓ |
| (d) Improve partnerships that utilize the skills and talents at Hawai‘i’s colleges and universities to benefit the County. | | | ✓ |
| (e) Support career-development and job-recruitment programs and centers. | | | ✓ |
| (f) Attract learning institutions and specialty schools to diversify and enhance educational opportunities. | | | ✓ |
| (g) Expand education of important life skills for the general public. | | | ✓ |
| (h) Support community facilities such as museums, libraries, nature centers, and open spaces that provide interactive-learning opportunities for all ages. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment system upgrades to the Helene Hall community center and does not maximize educational opportunities, however, the proposed improvements will ensure Helene Hall will be available for community events and interactive-learning opportunities for present and future generations.** | | | |
| **D. STRENGTHEN SOCIAL AND HEALTHCARE SERVICES** | | | |
| **Goal:** Health and social services in Maui County will fully and comprehensively serve all segments of the population. | | | ✓ |
| **Objective:** | | | |
| (1) In cooperation with the Federal and State governments and nonprofit agencies, broaden access to social and healthcare services and expand options to improve the overall wellness of the people of Maui County. | | | ✓ |
| **Policies:** | | | |
| (a) Work with other levels of government and the nonprofit sector to expand services to address hunger, homelessness, and poverty. | | | ✓ |
| (b) Support the improvement of opportunities for disadvantaged youth, encourage the tradition of hanai relatives, and support expanded opportunities for foster care. | | | ✓ |
| (c) Support expanded long-term-care options, both in institutions and at home, for patients requiring ongoing assistance and medical attention. | | | ✓ |
| (d) Encourage the expansion and improvement of local hospitals, facilitate the establishment of new healthcare facilities, and facilitate prompt and high-quality emergency- and urgent-care services for all. | | | ✓ |
| (e) Support broadened access to affordable health insurance and health care, and recognize the unique economic challenges posed to families when healthcare services are provided off-island. | | | ✓ |
| (f) Encourage equal access to social and healthcare services through both technological and traditional means. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective of broadening access to social and healthcare services.** | | | |
| **Objective:** | | | |
| (2) Encourage the Federal and State governments and the private sector to improve the quality and delivery of social and healthcare services. | | | ✓ |
| **Policies:** | | | |
| (a) Strengthen partnerships with government, nonprofit, and private organizations to provide funding and to improve counseling and other assistance to address substance abuse, domestic violence, and other pressing social challenges. | | | ✓ |
| (b) Encourage the State to improve the quality of medical personnel, facilities, services, and equipment. | | | ✓ |
| (c) Encourage investment to improve the recruitment of medical professionals and the quality of medical facilities and equipment throughout Maui County. | | | ✓ |
| (d) Promote the development of continuum-of-care facilities that provide assisted living, hospice, home-care, and skilled-nursing options allowing the individual to be cared for in a manner congruent with his or her needs and desires. | | | ✓ |
| (e) Support improved social, healthcare, and governmental services for special needs populations. | | | ✓ |
| (f) Plan for the needs of an aging population and the resulting impacts on social services, housing, and healthcare delivery. | | | ✓ |
| (g) Improve coordination among the police, the courts, and the public in the administration of social and healthcare services. | | | ✓ |
| (h) Support programs that address needs of veterans. | | | ✓ |
| (i) Support programs that address the needs of immigrants. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Invest in programs designed to improve the general welfare and quality of life of Native Hawaiians. | | | ✓ |
| (b) Assist and facilitate the State Department of Public Safety and others in efforts to strengthen programs and facilities that will improve the mental and social health of incarcerated people and assist in prison inmates' successful transition back into Maui County communities. | | | ✓ |
| (c) Develop and maintain a comprehensive index that will measure the health and wellness needs of families. | | | ✓ |
| (d) Provide heliports countywide for emergency health and safety purposes. | | | ✓ |
| ***Analysis:*** **The proposed action is not applicable to the objective and policies to improve the quality and delivery of social and health care services.** | | | |
| **Objective:** | | | |
| (3) Strengthen public-awareness programs related to healthy lifestyles and social and medical services. | | | ✓ |
| **Policies:** | | | |
| (a) Expand public awareness about personal safety and crime prevention. | | | ✓ |
| (b) Encourage residents to pursue education and training for careers in the healthcare, social services, and community-development fields. | | | ✓ |
| (c) Expand public awareness and promote programs to achieve healthy eating habits and drug-free lifestyles. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed project is not applicable to the objective and policies to strengthen public-awareness programs related to healthy lifestyles and social and medical services.** | | | |
| **E. EXPAND HOUSING OPPORTUNITIES FOR RESIDENTS** | | | |
| **Goal:** Quality, island-appropriate housing will be available to all residents. | | | ✓ |
| **Objective:** | | | |
| (1) Reduce the affordable housing deficit for residents. | | | ✓ |
| **Policies:** | | | |
| (a) Ensure that an adequate and permanent supply of affordable housing, both new and existing units, is made available for purchase or rental to our resident and/or workforce population, with special emphasis on providing housing for low- to moderate-income families, and ensure that all affordable housing remains affordable in perpetuity. | | | ✓ |
| (b) Seek innovative ways to lower housing costs without compromising the quality of our island lifestyle. | | | ✓ |
| (c) Seek innovative methods to secure land for the development of low- and moderate- income housing. | | | ✓ |
| (d) Provide the homeless population with emergency and transitional shelter and other supportive programs. | | | ✓ |
| (e) Provide for a range of senior-citizen and special needs housing choices on each island that affordably facilitates a continuum of care and services. | | | ✓ |
| (f) Support the Department of Hawaiian Home Lands' development of homestead lands. | | | ✓ |
| (g) Manage property-tax burdens to protect affordable resident homeownership. | | | ✓ |
| (h) Explore taxation mechanisms to increase and maintain access to affordable housing. | | | ✓ |
| (i) Improve awareness regarding available affordable homeowner's insurance. | | | ✓ |
| (j) Redevelop commercial areas with a mixture of affordable residential and business uses, where appropriate. | | | ✓ |
| (k) Ensure residents are given priority to obtain affordable housing units developed in their communities, consistent with all applicable regulations. | | | ✓ |
| (l) Establish pricing for affordable housing that is more reflective of Maui County's workforce than the United States Housing and Urban Development's median-income estimates for Maui County. | | | ✓ |
| (m) Develop neighborhoods with a mixture of accessible and integrated community facilities and services. | | | ✓ |
| (n) Provide alternative regulatory frameworks to facilitate the use of Kuleana lands by the descendants of Native Hawaiians who received those lands pursuant to the Kuleana Act of 1850. | | | ✓ |
| (o) Work with lending institutions to expand housing options and safeguard the financial security of homeowners. | | | ✓ |
| (p) Promote the use of the community land trust model and other land-lease and land- financing options. | | | ✓ |
| (q) Support the opportunity to age in place by providing accessible and appropriately designed residential units. | | | ✓ |
| ***Analysis:*** **The proposed project involves system upgrades at the Helene Hall and is not applicable to the objective and policies to reduce the affordable housing deficit for residents.** | | | |

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|---|---|---|---|
| **Objective:** | | | |
| (2) Increase the mix of housing types in towns and neighborhoods to promote sustainable land use planning, expand consumer choice, and protect the County's rural and small town character. | | | ✓ |
| **Policies:** | | | |
| (a) Seek innovative ways to develop 'ohana cottages and accessory-dwelling units as affordable housing. | | | ✓ |
| (b) Design neighborhoods to foster interaction among neighbors. | | | ✓ |
| (c) Encourage a mix of social, economic, and age groups within neighborhoods. | | | ✓ |
| (d) Promote infill housing in urban areas at scales that capitalize on existing infrastructure, lower development costs, and are consistent with existing or desired patterns of development. | | | ✓ |
| (e) Encourage the building industry to use environmentally sustainable materials, technologies, and site planning. | | | ✓ |
| (f) Develop workforce housing in proximity to job centers and transit facilities. | | | ✓ |
| (g) Provide incentives to developers and owners who incorporate green building practices and energy-efficient technologies into their housing developments. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Revise laws to support neighborhood designs that incorporate a mix of housing types that are appropriate for island living. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the objective and policies to increase the mix of housing types in towns and neighborhoods and to protect the County's rural and small town character.** | | | |
| **Objective:** | | | |
| (3) Increase and maintain the affordable housing inventory. | | | ✓ |
| **Policies:** | | | |
| (a) Recognize housing as a basic human need, and work to fulfill that need. | | | ✓ |
| (b) Prioritize available infrastructure capacity for affordable housing. | | | ✓ |
| (c) Improve communication, collaboration, and coordination among housing providers and social-service organizations. | | | ✓ |
| (d) Study future projected housing needs, monitor economic cycles, and prepare for future conditions on each island. | | | ✓ |
| (e) Develop public-private and nonprofit partnerships that facilitate the construction of quality affordable housing. | | | ✓ |
| (f) Streamline the review process for high-quality, affordable housing developments that implement the goals, objectives, and policies of the General Plan. | | | ✓ |
| (g) Minimize the intrusion of housing on prime, productive, and potentially productive agricultural lands and regionally valuable agricultural lands. | | | ✓ |
| (h) Encourage long-term residential use of existing and future housing to meet residential needs. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop policies to even out the peaks and valleys in Maui County's construction-demand cycles. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed project is not applicable to the objective and policies to increase and maintain the affordable housing inventory.** | | | |
| **Objective:** | | | |
| (4) Expand access to education related to housing options, homeownership, financing, and residential construction. | | | ✓ |
| **Policies:** | | | |
| (a) Broaden access to information about County, State, and Federal programs that provide financial assistance to renters and home buyers. | | | ✓ |
| (b) Expand access to information about opportunities for homeownership and self-help housing. | | | ✓ |
| (c) Educate residents about making housing choices that support their individual needs, the needs of their communities, and the health of the islands' natural systems. | | | ✓ |
| (d) Improve home buyers' education on all aspects of homeownership. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the objective and policies to expand access to education related to housing options, homeownership, financing, and residential construction.** | | | |
| **F. STRENGTHEN THE LOCAL ECONOMY** | | | |
| **Goal:** Maui County's economy will be diverse, sustainable, and supportive of community values. | | ✓ | |
| **Objective:** | | | |
| (1) Promote an economic climate that will encourage diversification of the County's economic base and a sustainable rate of economic growth. | | | ✓ |
| **Policies:** | | | |
| (a) Support economic decisions that create long-term benefits. | | | ✓ |
| (b) Promote lifelong education, career development, and technical training for existing and emerging industries. | | | ✓ |
| (c) Invest in infrastructure, facilities, and programs that foster economic diversification. | | | ✓ |
| (d) Support and promote locally produced products and locally owned operations and businesses that benefit local communities and meet local demand. | | | ✓ |
| (e) Support programs that assist industries to retain and attract more local labor and facilitate the creation of jobs that offer a living wage. | | | ✓ |
| (f) Encourage work environments that are safe, rewarding, and fulfilling to employees. | | ✓ | |
| (g) Support home-based businesses that are appropriate for and in character with the community. | | | ✓ |
| (h) Encourage businesses that promote the health and well-being of the residents, produce value-added products, and support community values. | | | ✓ |
| (i) Foster an understanding of the role of all industries in our economy. | | | ✓ |
| (j) Support efforts to improve conditions that foster economic vitality in our historic small towns. | | | ✓ |
| (k) Support and encourage traditional host-culture businesses and indigenous agricultural practices. | | | ✓ |
| (l) Support public and private entities that assist entrepreneurs in establishing locally operated businesses. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop regulations and programs that support opportunities for local merchants, farmers, and small businesses to sell their goods and services directly to the public. | | | ✓ |

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|---|---|---|---|
| (b) Monitor the carrying capacity of the islands' social, ecological, and infrastructure systems with respect to the economy. | | | ✓ |
| ***Analysis:*** **The proposed wastewater system upgrades at Helene Hall will ensure that employees who work at and maintain Helene Hall are provided a safe and sanitary working environment.** | | | |
| **Objective:** | | | |
| (2) Diversify and expand sustainable forms of agriculture and aquaculture. | | | ✓ |
| **Policies:** | | | |
| (a) Support programs that position Maui County's agricultural products as premium export products. | | | ✓ |
| (b) Prioritize the use of agricultural land to feed the local population, and promote the use of agricultural lands for sustainable and diversified agricultural activities. | | | ✓ |
| (c) Capitalize on Hawai'i's economic opportunities in the ecologically sensitive aquaculture industries. | | | ✓ |
| (d) Assist farmers to help make Maui County more self-sufficient in food production. | | | ✓ |
| (e) Support ordinances, programs, and policies that keep agricultural land and water available and affordable to farmers. | | | ✓ |
| (f) Support a tax structure that is conducive to the growth of the agricultural economy. | | | ✓ |
| (g) Enhance County efforts to monitor and regulate important agricultural issues. | | | ✓ |
| (h) Support education, research, and facilities that strengthen the agricultural industry. | | | ✓ |
| (i) Maintain the genetic integrity of existing food crops. | | | ✓ |
| (j) Encourage healthy and organic farm practices that contribute to land health and regeneration. | | | ✓ |
| (k) Support cooperatives and other types of nontraditional communal farming and efforts. | | | ✓ |
| (l) Encourage methods of monitoring and controlling genetically modified crops to prevent adverse effects. | | | ✓ |
| (m) Work with the State to ease the permitting process for the revitalization of traditional fish ponds. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Redirect efforts in the Office of Economic Development to further facilitate the development of the agricultural section and to monitor agricultural legislation and issues. | | | ✓ |
| (b) Publicly identify, with signage and other means, the field locations of all genetically modified crops. | | | ✓ |
| (c) Create agricultural parks in areas distant from genetically modified crops. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective and policies to diversify and expand sustainable forms of agriculture and aquaculture.** | | | |
| **Objective:** | | | |
| (3) Support a visitor industry that respects the resident culture and the environment. | | | ✓ |
| **Policies:** | | | |
| (a) Promote traditional Hawaiian practices in visitor-related facilities and activities. | | | ✓ |

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|---|---|---|---|
| (b) Encourage and educate the visitor industry to be sensitive to island lifestyles and cultural values. | | | ✓ |
| (c) Encourage a spirit of welcome for residents at visitor facilities, such as by offering kamaʻaina incentives and discount programs. | | | ✓ |
| (d) Support the renovation and enhancement of existing visitor facilities. | | | ✓ |
| (e) Support policies, programs, and a tax structure that redirect the benefits of the visitor industry back into the local community. | | | ✓ |
| (f) Encourage resident ownership of visitor-related businesses and facilities. | | | ✓ |
| (g) Develop partnerships to provide educational and training facilities to residents employed in the visitor industry. | | | ✓ |
| (h) Foster an understanding of local cultures, customs, and etiquette, and emphasize the importance of the Aloha Spirit as a common good for all. | | | ✓ |
| (i) Support the diversification, development, evolution, and integration of the visitor industry in a way that is compatible with the traditional, social, economic, spiritual, and environmental values of island residents | | | ✓ |
| (j) Improve collaboration between the visitor industry and the other sectors of Maui County's economy. | | | ✓ |
| (k) Perpetuate an authentic image of the Hawaiian culture and history and an appropriate recognition of the host culture. | | | ✓ |
| (l) Support the programs and initiatives outlined in the Maui County Tourism Strategic Plan 2006-2015. | | | ✓ |
| (m) Promote water conservation, beach conservation, and open-space conservation in areas providing services for visitors. | | | ✓ |
| (n) Recognize the important contributions that the visitor industry makes to the County's economy, and support a healthy and vibrant visitor industry. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the objective and policies to support a visitor industry that respects the resident culture and the environment.** | | | |
| **Objective:** | | | |
| (4) Expand economic sectors that increase living-wage job choices and are compatible with community values. | | | ✓ |
| **Policies:** | | | |
| (a) Support emerging industries, including the following:<br>• Health and wellness industry;<br>• Sports and recreation industry;<br>• Film and entertainment industry;<br>• Arts and culture industry;<br>• Renewable-energy industry;<br>• Research and development industry;<br>• High-technology and knowledge-based industries;<br>• Education and training industry;<br>• Ecotourism industry; and<br>• Agritourism industry. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective and policies to expand economic sectors that increase living-wage job choices.** | | | |
| **G. IMPROVE PARKS AND PUBLIC FACILITIES** | | | |
| **Goal:** A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors. | ✓ | | |
| **Objective:** | | | |
| (1) Expand access to recreational opportunities and community facilities to meet the present and future needs of residents of all ages and physical abilities. | ✓ | | |

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|---|---|---|---|
| **Policies:** | | | |
| (a) Protect, enhance, and expand access to public shoreline and mountain resources. | | | ✓ |
| (b) Expand and enhance the network of parks, multi-use paths, and bikeways. | | | ✓ |
| (c) Assist communities in developing recreational facilities that promote physical fitness. | ✓ | | |
| (d) Expand venue options for recreation and performances that enrich the lifestyles of Maui County's people. | ✓ | | |
| (e) Expand affordable recreational and after-school programs for youth. | | | ✓ |
| (f) Encourage and invest in recreational, social, and leisure activities that bring people together and build community pride. | | | ✓ |
| (g) Promote the development and enhancement of community centers, civic spaces, and gathering places throughout our communities. | ✓ | | |
| (h) Expand affordable access to recreational opportunities that support the local lifestyle. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Identify and reserve lands for cemeteries, and preserve existing cemeteries on all islands, appropriately accommodating varying cultural and, faith-based traditions. | | | ✓ |
| ***Analysis:*** **The proposed project will upgrade the existing wastewater treatment system to be in compliance with current health and sanitary standards and ensure the community facility will be available for use by current and future generations. Such uses may include classes which promote physical fitness and programs which enrich lifestyles.** | | | |
| **Objective:** | | | |
| (2) Improve the quality and adequacy of community facilities. | ✓ | | |
| **Policies:** | | | |
| (a) Provide an adequate supply of dedicated shelters and facilities for disaster relief. | | ✓ | |
| (b) Provide and maintain community facilities that are appropriately designed to reflect the traditions and customs of local cultures. | | ✓ | |
| (c) Ensure that parks and public facilities are safe and adequately equipped for the needs of all ages and physical abilities to the extent reasonable. | ✓ | | |
| (d) Maintain, enhance, expand, and provide new active and passive recreational facilities in ways that preserve the natural beauty of their locations. | | ✓ | |
| (e) Redesign or retrofit public facilities to adapt to major shifts in environmental or urban conditions to the extent reasonable. | ✓ | | |
| ***Analysis:*** **The proposed project is directly applicable to the objective and policies to improve the quality and adequacy of community facilities. The proposed improvements to Helene Hall wastewater treatment facility will ensure Helene Hall will be available for shelter for disaster relief. The proposed project will retrofit Helene Hall's wastewater system to adapt to major environmental shifts such as those related to sea level rise and natural hazard mitigation. A well-functioning Helene Hall complements the value of the Hāna Bay Park.** | | | |
| **Objective:** | | | |
| (3) Enhance the funding, management, and planning of public facilities and park lands. | ✓ | | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **Policies:** | | | |
| (a) Identify and encourage the establishment of regulated and environmentally sound campgrounds. | | | ✓ |
| (b) Manage park use and control access to natural resources in order to rest sensitive places and utilize the resources in a sustainable manner. | | | ✓ |
| (c) Provide public-recreational facilities that are clean and well-maintained. | ✓ | | |
| (d) Develop partnerships to ensure proper stewardship of the islands' trails, public lands, and access systems. | | | ✓ |
| (e) Ensure that there is an adequate supply of public restrooms in convenient locations. | | ✓ | |
| **Implementing Actions:** | | | |
| (a) Encourage the State to allow for overnight fishing along the shoreline in accordance with management plans and regulations. | | | ✓ |
| (b) Develop and regularly update functional plans, including those relating to public facilities, parks, and campgrounds. | | | ✓ |
| (c) Develop and adopt local level-of service standards for public facilities and parks. | | | ✓ |
| (d) Identify, acquire, and develop lands for parks, civic spaces, and public uses. | | | ✓ |
| ***Analysis:*** **The proposed project is directly applicable to the objective and policies to enhance funding, management, and planning of public facilities. The proposed improvements to the Helene Hall's wastewater system will ensure there is an adequate supply of public restrooms in convenient locations.** | | | |
| **H. DIVERSIFY TRANSPORTATION OPTIONS** | | | |
| **Goal:** Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods. | | | ✓ |
| **Objective:** | | | |
| (1) Provide an effective, affordable, and convenient ground-transportation system that is environmentally sustainable. | | | ✓ |
| **Policies:** | | | |
| (a) Execute planning strategies to reduce traffic congestion. | | | ✓ |
| (b) Plan for the efficient relocation of roadways for the public benefit. | | | ✓ |
| (c) Support the use of alternative roadway designs, such as traffic-calming techniques and modern roundabouts. | | | ✓ |
| (d) Increase route and mode options in the ground-transportation network. | | | ✓ |
| (e) Ensure that roadway systems are safe, efficient, and maintained in good condition. | | | ✓ |
| (f) Preserve roadway corridors that have historic, scenic, or unique physical attributes that enhance the character and scenic resources of communities. | | | ✓ |
| (g) Design new roads and roadway improvements to retain and enhance the existing character and scenic resources of the communities through which they pass. | | | ✓ |
| (h) Promote a variety of affordable and convenient transportation services that meet countywide and community needs and expand ridership of transit systems. | | | ✓ |
| (i) Collaborate with transit agencies, government agencies, employers, and operators to provide planning strategies that reduce peak-hour traffic. | | | ✓ |
| (j) Develop and expand an attractive, island-appropriate, and efficient public transportation system. | | | ✓ |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (k) Provide and encourage the development of specialized transportation options for the young, the elderly, and persons with disabilities. | | | ✓ |
| (l) Evaluate all alternatives to preserve quality of life before widening roads. | | | ✓ |
| (m) Encourage businesses in the promotion of alternative transportation options for resident and visitor use. | | | ✓ |
| (n) Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Create incentives and implement strategies to reduce visitor dependence on rental cars. | | | ✓ |
| (b) Establish efficient public-transit routes between employment centers and primary workforce residential areas. | | | ✓ |
| (c) Create attractive, island-appropriate, conveniently located park-and-ride and ride- share facilities. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not directly or indirectly applicable to the goal, objective, and policies to improve transportation options which are efficient, economical, and environmentally sensitive.** | | | |
| **Objective:** | | | |
| (2) Reduce the reliance on the automobile and fossil fuels by encouraging walking, bicycling, and other energy-efficient and safe alternative modes of transportation. | | | ✓ |
| **Policies:** | | | |
| (a) Make walking and bicycling transportation safe and easy between and within communities. | | | ✓ |
| (b) Require development to be designed with the pedestrian in mind. | | | ✓ |
| (c) Design new and retrofit existing rights-of-way with adequate sidewalks, bicycle lanes, or separated multi-use transit corridors. | | | ✓ |
| (d) Support the development of a countywide network of bikeways, equestrian trails, and pedestrian paths. | | | ✓ |
| (e) Support the reestablishment of traditional trails between communities, to the ocean, and through the mountains for public use. | | | ✓ |
| (f) Encourage educational programs to increase safety for pedestrians and bicyclists. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Design, build, and modify existing bikeways to improve safety and separation from automobiles. | | | ✓ |
| (b) Increase enforcement to reduce abuse of bicycle and pedestrian lanes by motorized vehicles. | | | ✓ |
| (c) Identify non-motorized transportation options as a priority for new sources of funding. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective and policies to reduce the reliance on the automobile and fossil fuels.** | | | |
| **Objective:** | | | |
| (3) Improve opportunities for affordable, efficient, safe, and reliable air transportation. | | | ✓ |
| **Policies:** | | | |
| (a) Discourage private helicopter and fixed-wing landing sites to mitigate environmental and social impacts. | | | ✓ |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (b) Encourage the use of quieter aircraft and noise-abatement procedures for arrivals and departures. | | | ✓ |
| (c) Encourage the modernization and maintenance of air-transportation facilities for general-aviation activities. | | | ✓ |
| (d) Encourage a viable and competitive atmosphere for air carriers to expand service and ensure sufficient intra-County flights and affordable fares for consumers. | | | ✓ |
| (e) Continue to support secondary airports, and encourage the State to provide them with adequate funding. | | | ✓ |
| (f) During Community Plan updates, explore the use of the smaller airports. | | | ✓ |
| (g) Encourage the State to provide efficient, adequate, and affordable parking and transit connections within and around airports. | | | ✓ |
| **Analysis: The proposed project is not applicable to the objective and policies to improve opportunities for air transportation.** | | | |
| **Objective:** | | | |
| (4) Improve opportunities for affordable, efficient, safe, and reliable ocean transportation. | | | ✓ |
| **Policies:** | | | |
| (a) Support programs and regulations that reduce the disposal of maritime waste and prevent spills into the ocean. | | | ✓ |
| (b) Encourage the upgrading of harbors to resist damage from natural hazards and disasters. | | | ✓ |
| (c) Encourage the State to study the use of existing harbors and set priorities for future use. | | | ✓ |
| (d) Explore all options to protect the traditional recreational uses of harbors, and mitigate harbor-upgrade impacts to recreational uses where feasible. | | | ✓ |
| (e) Encourage the upgrading of harbors and the separation of cargo and bulk materials from passenger and recreational uses. | | | ✓ |
| (f) Encourage the State to provide for improved capacity at shipping, docking, and storage facilities. | | | ✓ |
| (g) Encourage the State to provide adequate parking facilities and transit connections within and around harbor areas. | | | ✓ |
| (h) Encourage the redevelopment and revitalization of harbors while preserving historic and cultural assets in harbor districts. | | | ✓ |
| (i) Encourage the State to provide adequate facilities for small-boat operations, including small-boat launch ramps, according to community needs. | | | ✓ |
| (j) Support the maintenance and cleanliness of harbor facilities. | | | ✓ |
| (k) Support the redevelopment of harbors as pedestrian-oriented gathering places. | | | ✓ |
| ***Analysis:* The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective and policies to improve ocean transportation.** | | | |
| **Objective:** | | | |
| (5) Improve and expand the planning and management of transportation systems. | | | ✓ |
| **Policies:** | | | |
| (a) Encourage progressive community design and development that will reduce transportation trips. | | | ✓ |

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|---|---|---|---|
| (b) Require new developments to contribute their pro rata share of local and regional infrastructure costs. | | | ✓ |
| (c) Establish appropriate user fees for private enterprises that utilize public transportation facilities for recreational purposes. | | | ✓ |
| (d) Support the revision of roadway-design criteria and standards so that roads are compatible with surrounding neighborhoods and the character of rural areas. | | | ✓ |
| (e) Plan for multi-modal transportation and utility corridors on each island. | | | ✓ |
| (f) Support designing all transportation facilities, including airport, harbor, and mass- transit stations, to reflect Hawaiian architecture. | | | ✓ |
| (g) Utilize transportation-demand management as an integral part of transportation planning. | | | ✓ |
| (h) Accommodate the planting of street trees and other appropriate landscaping in all public rights-of-way. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the objective and policies to improve and expand planning and management of transportation systems.** | | | |
| **I. IMPROVE PHYSICAL INFRASTRUCTURE** | | | |
| **Goal:** Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies. | ✓ | | |
| **Objective:** | | | |
| (1) Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water. | | | ✓ |
| **Policies:** | | | |
| (a) Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents. | | | ✓ |
| (b) Develop and fund improved water-delivery systems. | | | ✓ |
| (c) Ensure a reliable and affordable supply of water for productive agricultural uses. | | | ✓ |
| (d) Promote the reclamation of gray water, and enable the use of reclaimed, gray, and brackish water for activities that do not require potable water. | | | ✓ |
| (e) Retain and expand public control and ownership of water resources and delivery systems. | | | ✓ |
| (f) Improve the management of water systems so that surface-water and groundwater resources are not degraded by overuse or pollution. | | | ✓ |
| (g) Explore and promote alternative water-source-development methods. | | | ✓ |
| (h) Seek reliable long-term sources of water to serve developments that achieve consistency with the appropriate Community Plans. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop a process to review all applications for desalination. | | | ✓ |
| ***Analysis:*** **The proposed project is directly applicable to the goal to improve and maintain Maui's physical infrastructure. However, the proposed project involves wastewater system improvements and is not directly applicable to the objective and policies related to water systems infrastructure.** | | | |
| **Objective:** | | | |
| (2) Improve waste-disposal practices and systems to be efficient, safe, and as environmentally sound as possible. | ✓ | | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **Policies:** | | | |
| (a) Provide sustainable waste-disposal systems and comprehensive, convenient recycling programs to reduce the flow of waste into landfills. | | | ✓ |
| (b) Support innovative and alternative practices in recycling solid waste and wastewater and disposing of hazardous waste. | | | ✓ |
| (c) Encourage vendors and owners of automobile, appliance, and white goods to participate in the safe disposal and recycling of such goods, and ensure greater accountability for large waste producers. | | | ✓ |
| (d) Develop strategies to promote public awareness to reduce pollution and litter, and encourage residents to reduce, reuse, recycle, and compost waste materials. | | | ✓ |
| (e) Pursue improvements and upgrades to existing wastewater and solid-waste systems consistent with current and future plans and the County's Capital Improvement Program. | ✓ | | |
| **Implementing Actions:** | | | |
| (a) Establish recycling, trash-separation, and materials recovery programs and facilities to reduce the flow of waste into landfills. | | | ✓ |
| (b) Study the feasibility of developing environmentally safe waste-to-energy facilities. | | | ✓ |
| (c) Utilize taxes and fees as means to encourage conservation and recycling. | | | ✓ |
| (d) Implement and regularly update the Integrated Solid Waste Management Plan. | | | ✓ |
| (e) Phase out the use of injection wells. | | | ✓ |
| ***Analysis:*** **The proposed project involves system upgrades at the Helene Hall and is directly applicable to the objective and policies to pursue improvements and upgrades to existing wastewater systems consistent with current and future plans and the County's Capital Improvement Program. The proposed project will upgrade Helene Hall's wastewater system to be environmentally sound. This action involves the relocation of the wastewater treatment facility and absorption field to the Hāna Ball Park, away from the Hāna Bay.** | | | |
| **Objective:** | | | |
| (3) Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency. | | | ✓ |
| **Policies:** | | | |
| (a) Promote the use of locally renewable energy sources, and reward energy efficiency. | | | ✓ |
| (b) Consider tax incentives and credits for the development of sustainable- and renewable-energy sources. | | | ✓ |
| (c) Expand education about energy conservation and self-sufficiency. | | | ✓ |
| (d) Encourage small-scale energy generation that utilizes wind, sun, water, biowaste, and other renewable sources of energy. | | | ✓ |
| (e) Expand renewable-energy production. | | | ✓ |
| (f) Develop public-private partnerships to ensure the use of renewable energy and increase energy efficiency. | | | ✓ |
| (g) Require the incorporation of locally appropriate energy-saving and green building design concepts in all new developments by providing energy efficient urban design guidelines and amendments to the Building Code. | | | ✓ |
| (h) Encourage the use of sustainable energy to power vehicles. | | | ✓ |

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|---|---|---|---|
| (i) Promote the retrofitting of existing buildings and new development to incorporate energy-saving design concepts and devices. | | | ✓ |
| (j) Encourage green footprint practices. | | | ✓ |
| (k) Reduce Maui County's dependence on fossil fuels and energy imports. | | | ✓ |
| (l) Support green building practices such as the construction of buildings that aim to minimize carbon dioxide production, produce renewable energy, and recycle water. | | | ✓ |
| (m) Promote and support environmentally friendly practices in all energy sectors. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Adopt an energy-efficiency policy for Maui County government as a model for other jurisdictions. | | | ✓ |
| (b) Adopt a Green Building Code, and support green building practices. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the objective and policies to increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.** | | | |
| **Objective:** | | | |
| (4) Direct growth in a way that makes efficient use of existing infrastructure and to areas where there is available infrastructure capacity. | ✓ | | |
| **Policies:** | | | |
| (a) Capitalize on existing infrastructure capacity as a priority over infrastructure expansion. | | | ✓ |
| (b) Planning for new towns should only be considered if a region's growth is too large to be directed into infill and adjacent growth areas. | | | ✓ |
| (c) Utilize appropriate infrastructure technologies in the appropriate locations. | ✓ | | |
| (d) Promote land use patterns that can be provided with infrastructure and public facilities in a cost-effective manner. | | ✓ | |
| (e) Support catchment systems and on-site wastewater treatment in rural areas and aggregated water and wastewater systems in urban areas if they are appropriately located. | ✓ | | |
| **Implementing Actions:** | | | |
| (a) Develop a streamlining system for urban infill projects. | | | ✓ |
| (b) Identify appropriate areas for urban expansion of existing towns where infrastructure and public facilities can be provided in a cost-effective manner. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is directly applicable to the objective and policies to direct growth that makes efficient use of existing infrastructure and areas where there is available infrastructure capacity. The proposed improvements will utilize appropriate wastewater technology in the appropriate location, whereby, the individual wastewater treatment facility and disposal field will be located offsite in order to protect nearshore marine environmental resources.** | | | |
| **Objective:** | | | |
| (5) Improve the planning and management of infrastructure systems. | ✓ | | |
| **Policies:** | | | |
| (a) Provide a reliable and sufficient level of funding to enhance and maintain infrastructure systems. | ✓ | | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (b) Require new developments to contribute their pro rata share of local and regional infrastructure costs. | | | ✓ |
| (c) Improve coordination among infrastructure providers and planning agencies to minimize construction impacts. | | ✓ | |
| (d) Maintain inventories of infrastructure capacity, and project future infrastructure needs. | | | ✓ |
| (e) Require social-justice and -equity issues to be considered during the infrastructure-planning process. | | | ✓ |
| (f) Discourage the development of critical infrastructure systems within hazard zones and the tsunami-inundation zone to the extent practical. | | ✓ | |
| (g) Ensure that infrastructure is built concurrent with or prior to development. | | | ✓ |
| (h) Ensure that basic infrastructure needs can be met during a disaster. | | ✓ | |
| (i) Locate public facilities and emergency services in appropriate locations that support the health, safety, and welfare of each community and that minimize delivery inefficiencies. | | ✓ | |
| (j) Promote the undergrounding of utility and other distribution lines for health safety, and aesthetic reasons. | ✓ | | |
| **Implementing Actions:** | | | |
| (a) Develop and regularly update functional plans for infrastructure systems. | | | ✓ |
| (b) Develop, adopt, and regularly update local or community-sensitive level-of service standards for infrastructure systems. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is directly and indirectly applicable to the objective and policies to improve planning and management of infrastructure systems. The proposed project will relocate Helene Hall's wastewater treatment and absorption field to the Hāna Ball Park, out of the Tsunami inundation zone. During construction, coordination will be carried out with other public agencies to minimize construction impacts.** | | | |
| **J. PROMOTE SUSTAINABLE LAND USE AND GROWTH MANAGEMENT** | | | |
| **Goal:** Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner. | | ✓ | |
| **Objective:** | | | |
| (1) Improve land use management and implement a directed-growth strategy. | | ✓ | |
| **Policies:** | | | |
| (a) Establish, map, and enforce urban- and rural-growth limits. | | | ✓ |
| (b) Direct urban and rural growth to designated areas. | | ✓ | |
| (c) Limit the number of visitor-accommodation units and facilities in Community Plan Areas. | | | ✓ |
| (d) Maintain a sustainable balance between the resident, part-time resident, and visitor populations. | | | ✓ |
| (e) Encourage redevelopment and infill in existing communities on lands intended for urban use to protect productive farm land and open-space resources. | | | ✓ |
| (f) Discourage new entitlements for residential, resort, or commercial development along the shoreline. | | | ✓ |
| (g) Restrict development in areas that are prone to natural hazards, disasters, or sea-level rise. | | | ✓ |

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|---|---|---|---|
| (h) Direct new development in and around communities with existing infrastructure and service capacity, and protect natural, scenic, shoreline, and cultural resources. | | | ✓ |
| (i) Establish and maintain permanent open space between communities to protect each community's identity. | | | ✓ |
| (j) Support the dedication of land for public uses. | | | ✓ |
| (k) Preserve the public's rights of access to and continuous lateral access along all shorelines. | | | ✓ |
| (l) Enable existing and future communities to be self-sufficient through sustainable land use planning and management practices. | | | ✓ |
| (m) Protect summits, slopes, and ridgelines from inappropriate development. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Regularly update urban- and rural-growth boundaries and their maps. | | | ✓ |
| (b) Establish transfer and purchase of development rights programs. | | | ✓ |
| (c) Develop and adopt a green infrastructure plan. | | | ✓ |
| (d) Develop studies to help determine a sustainable social, environmental, and economic carrying capacity for each island. | | | ✓ |
| (e) Identify and define resort-destination areas. | | | ✓ |
| ***Analysis:*** **The proposed project is indirectly applicable to the goal, objective, and policies to promote sustainable land use and growth management. The proposed project will be carried out within the Hāna Small Town Growth Boundary. The proposed project will relocate the wastewater treatment and disposal field improvements to the Hāna Ball Park, an area which is less prone to exposure to natural hazards.** | | | |
| **Objective:** | | | |
| (2) Improve planning for and management of agricultural lands and rural areas. | | | ✓ |
| **Policies:** | | | |
| (a) Protect prime, productive, and potentially productive agricultural lands to maintain the islands' agricultural and rural identities and economies. | | | ✓ |
| (b) Provide opportunities and incentives for self-sufficient and subsistence homesteads and farms. | | | ✓ |
| (c) Discourage developing or subdividing agriculturally designated lands when non- agricultural activities would be primary uses. | | | ✓ |
| (d) Conduct agricultural-development planning to facilitate robust and sustainable agricultural activities. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Inventory and protect prime, productive, and potentially productive agricultural lands from competing non-agricultural land uses. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall, which is located within a Small Town Growth Boundary and is not applicable to the objective and policies to improve planning and management of agricultural lands and rural areas.** | | | |
| **Objective:** | | | |
| (3) Design all developments to be in harmony with the environment and to protect each community's sense of place. | ✓ | | |
| **Policies:** | | | |
| (a) Support and provide incentives for green building practices. | | | ✓ |

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|---|---|---|---|
| (b) Encourage the incorporation of green building practices and technologies into all government facilities to the extent practicable. | | | ✓ |
| (c) Protect and enhance the unique architectural and landscape characteristics of each Community Plan Area, small town, and neighborhood. | | | ✓ |
| (d) Ensure that adequate recreational areas, open spaces, and public-gathering places are provided and maintained in all urban centers and neighborhoods. | ✓ | | |
| (e) Ensure business districts are distinctive, attractive, and pedestrian-friendly destinations. | | | ✓ |
| (f) Use trees and other forms of landscaping along rights-of-way and within parking lots to provide shade, beauty, urban-heat reduction, and separation of pedestrians from automobile traffic in accordance with community desires. | | | ✓ |
| (g) Where appropriate, integrate public-transit, equestrian, pedestrian, and bicycle facilities, and public rights-of-way as design elements in new and existing communities. | | | ✓ |
| (h) Ensure better connectivity and linkages between land uses. | | | ✓ |
| (i) Adequately buffer and mitigate noise and air pollution in mixed-use areas to maintain residential quality of life. | | | ✓ |
| (j) Protect rural communities and traditional small towns by regulating the footprint, locations, site planning, and design of structures. | | | ✓ |
| (k) Support small-town revitalization and preservation. | | ✓ | |
| (l) Facilitate safe pedestrian access, and create linkages between destinations and within parking areas. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Establish design guidelines and standards to enhance urban and rural environments. | | | ✓ |
| (b) Provide funding for civic-center and civic-space developments. | | | ✓ |
| (c) Establish and enhance urban forests in neighborhoods and business districts. | | | ✓ |
| ***Analysis:*** **The proposed project is directly and indirectly applicable to the objective and policies to design all developments to be in harmony with the environment. The proposed wastewater treatment facility and disposal field will be located offsite at the Hāna Ball Park, away from the shoreline. The proposed project will ensure an adequate recreational facility and public-gathering space will be provided for current and future generations of Hāna residents. The proposed improvements will not expand the footprint of Hāna's Small Town Boundary.** | | | |
| **Objective:** | | | |
| (4) Improve and increase efficiency in land use planning and management. | | ✓ | |
| **Policies:** | | | |
| (a) Assess the cumulative impact of developments on natural ecosystems, natural resources, wildlife habitat, and surrounding uses. | | ✓ | |
| (b) Ensure that new development projects requiring discretionary permits demonstrate a community need, show consistency with the General Plan, and provide an analysis of impacts. | | ✓ | |
| (c) Encourage public and private partnerships to preserve lands of importance, develop housing, and meet the needs of residents. | | | ✓ |

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|---|---|---|---|
| (d) Promote creative subdivision designs that implement best practices in land development, sustainable management of natural and physical resources, increased pedestrian and bicycle functionality and safety, and the principles of livable communities. | | | ✓ |
| (e) Coordinate with Federal, State, and County officials in order to ensure that land use decisions are consistent with County plans and the vision local populations have for their communities. | | | ✓ |
| (f) Enable greater public participation in the review of subdivisions. | | | ✓ |
| (g) Improve land use decision making through the use of land- and geographic information systems. | | ✓ | |
| **Implementing Actions:** | | | |
| (a) Institute a time limit and sunsetting stipulations on development entitlements and their implementation. | | | ✓ |
| ***Analysis:*** **The proposed project is indirectly applicable to the objective and policies to improve efficiency in land use planning and management. An EA will be carried out on the proposed action to analyze impacts, including the cumulative impacts of the development. The proposed project will require a SMA Use permit and demonstrates a community need. The EA document contains an assessment of the consistency of the project with the County of Maui's General Plan. Land and geographic information systems were resourced in the Draft EA to improve land use decision making.** | | | |
| **K. STRIVE FOR GOOD GOVERNANCE** | | | |
| **Objective:** | | | |
| (1) Strengthen governmental planning, coordination, consensus building, and decision making. | | ✓ | |
| **Policies:** | | | |
| (a) Plan and prepare for the effects of social, demographic, economic, and environmental shifts. | | ✓ | |
| (b) Plan for and address the possible implications of Hawaiian sovereignty. | | | ✓ |
| (c) Encourage collaboration among government agencies to reduce duplication of efforts and promote information availability and exchange. | | | ✓ |
| (d) Expand opportunities for the County to be involved in and affect State and Federal decision making. | | | ✓ |
| (e) Plan and prepare for large-scale emergencies and contingencies. | | ✓ | |
| (f) Improve public awareness about preparing for natural hazards, disasters, and evacuation plans. | | ✓ | |
| (g) Improve coordination among Federal, State, and County agencies. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop policies, regulations, and programs to protect and enhance the unique character and needs of the County's various communities. | | | ✓ |
| (b) Evaluate and if necessary, recommend modifications to the County Charter that could result in a possible change to the form of governance for Maui County. | | | ✓ |
| (c) Study and evaluate the feasibility and implications of voting in Maui County Council elections. | | | ✓ |
| (d) Study and evaluate the feasibility of authorizing town governments in Maui County. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall carried out by the County Department of Environmental Management and is indirectly applicable to the objective and policies to strengthen governmental planning and decision making. The proposed project has been designed in consideration of long-term environmental shifts which may be attributed to climate change. Relocating the treatment and disposal components of the system to the Hāna Ball Park will help ensure that the improvements are protected from natural hazards such as coastal storm effects. The public review of the Draft EA and public hearing during the SMA Use Permit proceedings will raise public awareness about preparing for natural hazards.** | | | |
| **Objective:** | | | |
| (2) Promote civic engagement. | ✓ | | |
| **Policies:** | | | |
| (a) Foster consensus building through in-depth, innovative, and accessible public participatory processes. | ✓ | | |
| (b) Promote and ensure public participation and equal access to government among all citizens. | ✓ | | |
| (c) Encourage a broad cross-section of residents to volunteer on boards and commissions. | | | ✓ |
| (d) Encourage the State to improve its community-involvement processes. | | | ✓ |
| (e) Support community-based decision making. | | | ✓ |
| (f) Expand advisory functions at the community level. | | | ✓ |
| (g) Expand opportunities for all members of the public to participate in public meetings and forums. | ✓ | | |
| (h) Facilitate the community's ability to obtain relevant documentation. | ✓ | | |
| (i) Increase voter registration and turnout. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Implement two-way communication using audio-visual technology that allows residents to participate in the County's planning processes. | | | ✓ |
| (b) Ensure and expand the use of online notification of County business and public meetings, and ensure the posting of all County board and commission meeting minutes. | | | ✓ |
| (c) Explore funding mechanisms to improve participation by volunteers on boards and commissions. | | | ✓ |
| (d) Develop a project-review process that mandates early and ongoing consultation in and with communities affected by planning and land use activities. | | ✓ | |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is directly applicable to the objective and policies to promote civic engagement. The County of Maui DEM participated in four (4) community Town Hall meetings on March 20, 2019, July 7, 2021, and October 6, 2021 and October 11, 2022. These meetings provided the DEM an opportunity to present the project to the Hāna community and in turn, provide feedback to the DEM. Further, the Draft EA and early consultation process provides a public review process that promotes ongoing consultation with the Hāna community. The EA and SMA/SSV permit processes facilitates the community's ability to obtain relevant documentation on the proposed action in a timely manner, as well as, for members of the public to participate in public meetings and forums.** | | | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **Objective:** | | | |
| (3) Improve the efficiency, reliability, and transparency of County government's internal processes and decision making. | ✓ | | |
| **Policies:** | | | |
| (a) Use advanced technology to improve efficiency. | ✓ | | |
| (b) Simplify and clarify the permitting process to provide uniformity, reliability, efficiency, and transparency. | | | ✓ |
| (c) Improve communication with Lanaʻi and Molokaʻi through the expanded use of information technologies, expanded staffing, and the creation and expansion of government-service centers. | | | ✓ |
| (d) Ensure that laws, policies, and regulations are internally consistent and effectuate the intent of the General Plan. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Update the County Code to be consistent with the General Plan. | | | ✓ |
| (b) Identify and update County regulations and procedures to increase the productivity and efficiency of County government. | | | ✓ |
| (c) Develop local level-of-service standards for infrastructure, public facilities, and services. | | ✓ | |
| (d) Implement plans through programs, regulations, and capital improvements in a timely manner. | | | ✓ |
| (e) Expand government online services. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is directly applicable to the objective and policies to improve the efficiency and transparency of County government's decision making. As noted previously, the DEM presented the project to the Hāna community through various Town Hall meetings. The BlueJeans online meeting platform was utilized to encourage more participation during the COVID pandemic. Further, the EA and SMA/SSV Permit processes provide project information to improve the transparency of County government's decision making. The proposed project establishes appropriate local level-of-service standard for wastewater technology and public facilities services.** | | | |
| **Objective:** | | | |
| (4) Adequately fund in order to effectively administer, implement, and enforce the General Plan. | | ✓ | |
| **Policies:** | | | |
| (a) Adequately fund, staff, and support the timely update and implementation of planning policy, programs, functional plans, and enforcement activities. | | | ✓ |
| (b) Ensure that the County's General Plan process provides for efficient planning at the County, island, town, and neighborhood level. | | | ✓ |
| (c) Encourage ongoing professional development, education, and training of County employees. | | | ✓ |
| (d) Encourage competitive compensation packages for County employees to attract and retain County personnel. | | | ✓ |
| (e) Enable the County government to be more responsive in implementing our General Plan and Community Plans. | | | ✓ |
| (f) Review discretionary permits for compliance with the Countywide Policy Plan. | | ✓ | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (g) Strengthen the enforcement of County, State, and Federal land use laws. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Establish penalties to ensure compliance with County, State, and Federal land use laws. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is indirectly applicable to the objective and policies to implement the General Plan. The proposed project has been assessed for consistency with the Countywide Policy Plan as set forth herein.** | | | |
| **Objective:** | | | |
| (5) Strive for County government to be a role model for implementing cultural and environmental policies and practices. | | ✓ | |
| **Policies:** | | | |
| (a) Educate residents on the benefits of sustainable practices. | | | ✓ |
| (b) Encourage the retention and hiring of qualified professionals who can improve cultural and environmental practices. | | ✓ | |
| (c) Incorporate environmentally sound and culturally appropriate practices in government operations and services. | | | ✓ |
| (d) Encourage all vendors with County contracts to incorporate environmentally sound and culturally appropriate practices. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades carried out by the County at the Helene Hall and is indirectly applicable to the objective and policies to implementing cultural and environmental policies and practices. An Archaeological Field Inspection, Cultural Impact Assessment, and biological resources survey were carried out on the proposed project to ensure environmental, historic, and cultural practices are not adversely impacted. Qualified professionals who can improve cultural and environmental practices were contracted for these studies.** | | | |
| **L. MITIGATE CLIMATE CHANGE AND WORK TOWARD RESILIENCE** | | | |
| **Goal:** Minimize the causes and negative effects of climate change. | | ✓ | |
| **Objective:** | | | |
| (1) Lower carbon emissions levels to mitigate climate change impacts and limit the rate of global warming. | | ✓ | |
| **Policies:** | | | |
| (a) Increase reforestation efforts by encouraging residents and visitors to plant non- invasive gardens and trees. | | | ✓ |
| (b) Improve communication, coordination, and collaboration among those that work to mitigate climate change impacts. | | | ✓ |
| (c) Promote the teaching and use of regenerative agriculture. | | | ✓ |
| (d) Invest in infrastructure that is not dependent on fossil fuels and utilizes renewable energy. | | | ✓ |
| (e) Improve efforts to mitigate and plan for the impact of natural disasters and global warming. | | | ✓ |
| (f) Encourage the building industry to use environmentally sustainable materials, technology, and site planning. | | ✓ | |
| (g) Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change. | | ✓ | |
| (h) Plan and prepare for and educate visitors and residents about the possible effects of global warming. | | | ✓ |
| (i) Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship. | | | ✓ |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (j) Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Implement Federal and State policies that require a reduction of greenhouse-gas emissions. | | | ✓ |
| (b) Establish a Countywide Climate Action Plan | | | ✓ |
| (c) Develop programs that assist residents and businesses with obtaining access to renewable energy sources. | | | ✓ |
| (d) Revise laws to support neighborhood designs that incorporate the use of renewable energy sources that are appropriate for island living. | | | ✓ |
| (e) Incorporate planting of native and indigenous trees as a major component of Urban Design to both cool neighborhoods and reduce carbon dioxide. | | | ✓ |
| (f) Coordinate with State, County, and private landowners in the development of forestry and prioritizing of native and indigenous trees to reduce carbon dioxide. | | | ✓ |
| (g) Strongly support efforts to restore and improve Maui County's watersheds for the purpose of improving the water supply, controlling carbon dioxide levels, decreasing soil runoff, and reducing coastal flooding. | | ✓ | |
| ***Analysis:*** **The proposed project is located outside of the Sea Level Rise Exposure Area (SLR-XA), an area exposed to potential chronic flooding based on modeling of passive flooding, annual high wave flooding, and coastal erosion. Indirectly, the proposed action supports the County's goal, objective and policies for minimizing the negative impacts of climate change by constructing improvements outside of the 3.2-foot SLR-XA which depict hazards that may occur in the mid to latter half of this century due to climate change. Additionally, BMPs will be implemented to control runoff, sedimentation, and erosion.** | | | |
| **Objective:** | | | |
| (2) Reduce the impacts of sea-level rise by acknowledging climate change, adapting, mitigating, and planning accordingly. | | ✓ | |
| **Policies:** | | | |
| (a) Evaluate development to assess potential short-term and long-term sea-level rise impacts on nearshore environments. | | ✓ | |
| (b) Improve efforts to mitigate and plan for the impact of sea-level rise. | | | ✓ |
| (c) Protect undeveloped beaches, dunes, and ecosystems, and restore natural shoreline processes. | | | ✓ |
| (d) Develop an inventory of private wastewater systems (septic systems, cesspools) that may be affected by sea-level rise. | | | ✓ |
| (e) Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff. | | | ✓ |
| (f) Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution. | | | ✓ |
| (g) Discourage beach hardening processes such as building sea walls and revetments that block movement of the shoreline and can accelerate erosion. | | | ✓ |
| (h) Discourage new entitlements for residential, resort, or commercial development along the shoreline. | | | ✓ |
| (i) Restrict development in areas that are prone to sea-level rise. | | | ✓ |
| (j) Move or rebuild public facilities away from nearshore environments to account for sea-level rise to the extent reasonable. | | ✓ | |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| (k) Move or rebuild roads that are in sea-level rise inundation zones to the extent reasonable. | | | ✓ |
| (l) Ensure that public or affordable housing projects include siting and design standards that promote equity and resilience for vulnerable populations. | | | ✓ |
| (m) Identify, research, and evaluate innovative and sustainable financing to support mitigation and adaptation to sea level rise. | | | ✓ |
| **Implementing Actions:** | | | |
| (a) Develop programs to help transition shoreline property owners out of their nearshore locations and develop a long-term plan to stay out of the way of natural beach migration. | | | ✓ |
| (b) Identify buildings, roads, and other infrastructure that are in sea-level rise inundation zones and assist in adaptive efforts, including nature-based solutions, elevation, or moving them away from such zones. | | | ✓ |
| (c) Identify disaster redevelopment alternatives that support resilience-focused adaptation to sea level rise in the event of a catastrophic coastal event. | | | ✓ |
| ***Analysis:*** **The proposed action indirectly supports the objective and policies for reducing the impacts of sea level rise and adapting to climate change. The proposed improvements are located entirely outside of the 3.2-foot SLR-XA. Although the project is located entirely outside of the 3.2-foot SLR-XA, one (1) of the existing ATUs will be repurposed as a wastewater treatment pump and relocated further inland and further away from the shoreline.** | | | |
| **Objective:** | | | |
| (3) Significantly increase the use of renewable and green technologies to. promote energy efficiency and energy self-sufficiency. | | | ✓ |
| **Policies:** | | | |
| (a) Promote the use of locally renewable energy sources, and reward energy efficiency. | | | ✓ |
| (b) Consider tax incentives and credits for the development of sustainable- and renewable-energy sources. | | | ✓ |
| (c) Expand education about energy conservation and self-sufficiency. | | | ✓ |
| (d) Encourage small-scale energy generation that utilizes wind, sun, water, biowaste, and other renewable sources of energy. | | | ✓ |
| (e) Expand renewable-energy production. | | | ✓ |
| (f) Develop public-private partnerships to ensure the use of renewable energy and increase energy efficiency. | | | ✓ |
| (g) Require the incorporation of locally appropriate energy-saving and green building design concepts in all new developments by providing energy-efficient urban design guidelines and amendments to the Building Code. | | | ✓ |
| (h) Encourage the use of sustainable energy to power vehicles. | | | ✓ |
| (i) Promote the retrofitting of existing buildings and new development to incorporate energy-saving design concepts and devices. | | | ✓ |
| (j) Encourage green footprint practices. | | | ✓ |
| (k) Reduce Maui County's dependence on fossil fuels and energy imports. | | | ✓ |
| (l) Support green building practices such as the construction of buildings that aim to minimize carbon dioxide production, produce renewable energy, and recycle water. | | | ✓ |
| (m) Promote and support environmentally friendly practices in all energy sectors. | | | ✓ |

| COUNTYWIDE POLICY PLAN<br>(Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable) | DA | IA | NA |
|---|---|---|---|
| **<u>Implementing Actions</u>:** | | | |
| (a) Adopt an energy-efficiency policy for Maui County government as a model for other jurisdictions. | | | ✓ |
| (b) Adopt a Green Building Code and support green building practices. | | | ✓ |
| ***Analysis:*** **The objective and policies for significantly increasing the use of renewable energy to minimize impacts from climate change is important. However, the proposed action is neither directly or indirectly applicable to the objective of significantly increasing the use of renewable and green technologies and will not require a substantial amount of energy from fossil fuels.** | | | |

# ANALYSIS OF THE PROJECT'S CONFORMANCE WITH THE MAUI ISLAND PLAN

APPENDIX

# F-3

# APPENDIX F-3

## Analysis of Project Applicability to Maui Island Plan

The Maui Island Plan (MIP) is applicable to the island of Maui only, providing more specific policy-based strategies for population, land use, transportation, public and community facilities, water and wastewater systems, visitor destinations, urban design, and other matters related to future growth.

As provided by Chapter 2.80B, the MIP shall include the following components:

1. *An island-wide land use strategy, including a managed and directed growth plan*
2. *A water element assessing supply, demand and quality parameters*
3. *A nearshore ecosystem element assessing nearshore waters and requirements for preservation and restoration*
4. *An implementation program which addresses the County's 20-year capital improvement requirements, financial program for implementation, and action implementation schedule*
5. *Milestone indicators designed to measure implementation progress of the MIP*

It is noted that Ordinance No. 4004 does not address the component relating to the implementation program. Chapter 2.80B of the Maui County Code, relating to the General Plan, was amended via Ordinance No. 3979, October 5, 2012, to provide that the implementation program component be adopted no later than one (1) year following the effective date of Ordinance No. 4004. In December 2013 and March 2014, the Council approved time extensions for approval and adoption of the implementation chapter of the MIP. The implementation program component of the MIP was adopted as Ordinance No. 4126 on May 29, 2014.

The MIP addresses a number of planning categories with detailed policy analysis and recommendations which are framed in terms of goals, objectives, policies and implementing actions. These planning categories address the following areas:

1. *Population*
2. *Heritage Resources*
3. *Natural Hazards*
4. *Economic Development*
5. *Housing*
6. *Infrastructure and Public Facilities*
7. *Land Use*

The proposed project has been reviewed with respect to pertinent goals, objectives, policies and implementing actions of the MIP. The analysis is presented in the table below.

The methodology used for assessing a project's relationship to the MIP involves examining the project's applicability to the Plan's goals, objectives, and policies. "Applicability" refers to a project's need, purpose and effects, and how these advance or promote a particular set of goals, objectives and priority guidelines. In assessing the relationship between a proposed action and the MIP, an action may be categorized in one of the following groups:

1. **Directly applicable:** the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

   **Example:** Using a county project to develop a new water source and related transmission facilities as an example, a project of this nature would be directly applicable to the MIP's Objective 6.3.2, which states: *"Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs".* As well, this action would directly advance the MIP's Policy 6.3.2.f, which states: *Acquire and develop additional sources of potable water.* The need, purpose and effects of the proposed new water source project is directly applicable to the foregoing objective and policy.

2. **Indirectly applicable:** the action's potential effects indirectly supports or advances the objective, policy or priority guideline.

   **Example:** The county water source project cited above supports the MIP's Objective 7.3.2 which states: *"Facilitate more self-sufficient and sustainable communities".* Additionally, this kind of action is indirectly applicable to the related MIP Policy 7.3.2.f, which states: *"Facilitate the development of housing by focusing projects in locations where land and infrastructure costs facilitate the development of affordably-priced housing".* In this case, the principle purpose of the project was not to specifically facilitate the development of affordably-priced housing. However, the project's contribution to adequate infrastructure systems is supportive of the policy. In this instance, the proposed action may be deemed to be indirectly applicable to the objective and policy of the MIP.

3. **Not applicable:** The action and its potential effects have no direct or indirect relationship to the objectives and policies of the Maui Island Plan.

   **Example:** That same county water source improvement project referenced above, may not have direct or indirect linkage to the MIP's Objective 4.2.1, which states: *"Increase the economic contribution of the visitor industry to the island's environmental well-being for the island's residents' quality of life"*. In this case, there is no reasonably deduced direct or indirect relationship between the proposed action and Objective 4.2.1. Hence, the proposed action would be considered not applicable to the objective.

In general, a proposed action's applicability to the MIP is assessed on the basis of the action's direct or indirect relationship to the respective objectives, policies and implementing actions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions.

| **Maui Island Plan Goals, Objectives and Policies**<br>**Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable** | | **DA** | **IA** | **NA** |
|---|---|---|---|---|
| **CHAPTER 1 – POPULATION** | | | | |
| **Goal:** | | | | |
| 1.1 | Maui's people, values, and lifestyles thrive through strong, healthy, and vibrant island communities. | | ✓ | |
| **Objective:** | | | | |
| 1.1.1 | Greater retention and return of island residents by providing viable work, education, and lifestyle options. | | ✓ | |
| **Policies:** | | | | |
| 1.1.1.a | Expand programs that enable the community to meet the education, employment, housing, and social goals of youth and young adults. | | ✓ | |
| 1.1.1.b | Expand housing, transportation, employment, and social opportunities to ensure residents are able to comfortably age within their communities. | | ✓ | |
| 1.1.1.c | Measure and track resident satisfaction through surveys and community indicators. | | | ✓ |
| 1.1.1.d | Support funding for transportation, housing, health care, recreation, and social service programs that help those with special needs (including the elderly and disabled). | | ✓ | |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is indirectly applicable to the goal, objective, and policies related to vibrant island communities. The proposed project will ensure Helene Hall will be available to Hāna residents in the long term for social gathering and recreational use to meet social goals of the youth, young adults, adults, and elderly.** | | | | |
| **CHAPTER 2 – HERITAGE RESOURCES** | | | | |
| **CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES ISSUES** | | | | |
| **Goal:** | | | | |
| 2.1 | Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions. | | ✓ | |
| **Objective:** | | | | |
| 2.1.1 | An island culture and lifestyle that is healthy and vibrant as measured by the ability of residents to live on Maui, access and enjoy the natural environment, and practice Hawaiian customs and traditions in accordance with Article XII, Section 7, Hawai'i State Constitution, and Section 7-1, Hawai`i Revised Statutes (HRS). | | ✓ | |
| **Policies:** | | | | |
| 2.1.1.a | Perpetuate the spirit of aloha and celebrate the host Hawaiian culture and other ethnic cultures. | | ✓ | |
| 2.1.1.b | Perpetuate a respect for diversity and recognize the broad blending of cultures and ethnicities as vital to the quality of life on Maui. | | ✓ | |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| 2.1.1.c Ensure traditional public access routes, including native Hawaiian trails, are maintained for public use. | | ✓ | |
| 2.1.1.d Support the education of visitors and new residents about the customs and etiquette of the Hawaiian culture, as well as other cultures. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is indirectly applicable to the goal, objective and policies to respect and protect archaeological and cultural resources. An Archaeological Field Inspection and Cultural Impact Assessment have been carried out on the proposed project to ensure historic and cultural resources are protected and not adversely impacted. Upgrades to Helene Hall wastewater system will ensure community facility and commercial kitchen will be available to host gatherings and events, many of which celebrate the host Hawaiian and other ethnic cultures.** | | | |
| **Objective:** | | | |
| 2.2 A more effective and efficient planning and review process that incorporates the best available cultural resources inventory, protection techniques, and preservation strategies. | | ✓ | |
| **Policies:** | | | |
| 2.1.2.a Ensure that the island has a comprehensive and up-to-date inventory of historic and archaeological resources, and their cultural significance. | | ✓ | |
| 2.1.2.b Require the update of existing planning and regulatory mechanisms to protect the natural, cultural, scenic, and historic resources within designated Heritage Areas (see Cultural Resources Overlay/Scenic Corridor Protection Technical Reference Map). | | | ✓ |
| 2.1.2.c Ensure that cultural, historic, and archaeological resources are protected for the benefit of present and future generations. | | ✓ | |
| **Objective:** | | | |
| 2.3 Enhance the island's historic, archaeological, and cultural resources. | | ✓ | |
| **Policies:** | | | |
| 2.1.3.a Identify and pursue a listing of the properties and sites on the State and National Register of Historic Places. | | | ✓ |
| 2.1.3.b Support the use of easements, dedications, and other mechanisms to acquire, maintain, and protect lands with cultural, archaeological, and historic significance. | | | ✓ |
| 2.1.3.c Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD's administrative rules, including consultation and monitoring during construction phases of projects. | | ✓ | |
| 2.1.3.d Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures. | | | ✓ |
| 2.1.3.e Encourage property owners to register historic and archaeological sites on the State and National Register. | | | ✓ |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| 2.1.3.f Support opportunities for public involvement with the intent to facilitate the protection and restoration of historic and archeological sites, including consultation with stakeholders. | | | ✓ |
| 2.1.3.g Encourage the resolution of land title questions relating to Land Commission Awards and Royal patents. | | | ✓ |
| 2.1.3.h Ensure compliance with historic preservation laws, and discourage demolition of properties that are determined to be eligible for listing on the National or State Register of Historic Places. | | ✓ | |
| ***Analysis:*** **The proposed project involves wastewater upgrades at the Helene Hall and is indirectly applicable to the objective and policies for a more effective and efficient planning and review process that incorporates the best available cultural resources inventory, protection techniques, and preservation strategies. An Archaeological Field Inspection and Cultural Impact Assessment have been carried out to identify, protect, and ensure historic resources and cultural practices are not adversely impacted. As such, the proposed project is in compliance with historic preservation laws.** | | | |
| **SHORELINE, REEFS, AND NEARSHORE WATERS** | | | |
| **Goal:** | | | |
| 2.2 An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity. | | ✓ | |
| **Objective:** | | | |
| 2.2.1 A more comprehensive and community-based ICZM program. | | | ✓ |
| **Policies:** | | | |
| 2.2.1.a Encourage a management system that protects and temporarily rests the reef ecosystems from overuse. | | | ✓ |
| 2.2.1.b Support the establishment of additional MMAs and reef replenishment areas. | | | ✓ |
| 2.2.1.c Work with appropriate agencies and community members to protect any special managed conservation areas from overuse and ensure that surrounding land uses do not contribute to the degradation of the natural resources, such as ‘Ahihi-Kina‘u Natural Area Reserve, Honolua-Mokulē‘ia Bay Marine Life Conservation District, and Mākena State Park. | | | ✓ |
| 2.2.1.d Incorporate the following into the MIP, where consistent with the MIP: | | | ✓ |
| (1) Beach Management Plan for Maui; | | | ✓ |
| (2) Coastal Nonpoint Pollution Control Program Management Plan; | | | ✓ |
| (3) Implementation Plan for Polluted Runoff Control; and | | | ✓ |
| (4) Ocean Resource Management Plan. | | | ✓ |
| 2.2.1.e Support greater coordination among governmental agencies involved with the protection of the island’s marine resources. | | | ✓ |
| **Objective:** | | | |
| 2.2.2 Improved reef health, coastal water quality, and marine life. | | ✓ | |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **Policies:** | | | |
| 2.2.2.a Create additional mechanisms where needed to contain and control runoff and pollution. | | ✓ | |
| 2.2.2.b Allow extraction of high quality, Class A, low silt sands only when they will be used to protect or restore Maui's shorelines and beaches. | | | ✓ |
| 2.2.2.c Carefully manage beach nourishment activities to protect the coastal and marine ecosystem. | | | ✓ |
| 2.2.2.d Require, where appropriate, a buffer between landscaped areas and the shoreline, gulches, and streams to reduce the runoff of fertilizers, pesticides, herbicides, and other pollutants into coastal waters. | | | ✓ |
| 2.2.2.e Strictly regulate shoreline armoring in accordance with adopted Shoreline Rules, with an intent to protect the coastal and marine ecosystem. | | | ✓ |
| 2.2.2.f Support greater protection of Keālia Pond National Wildlife Refuge through the following: | | | ✓ |
| (1) Enhancement of marine ecosystems; | | | ✓ |
| (2) Beach and sand dune restoration; and | | | ✓ |
| (3) Expansion of habitat for Maui's threatened or endangered sea turtles, birds, and other species. | | | ✓ |
| 2.2.2.g Support the development of regulations to prevent the excessive depletion of fish stocks due to non-sustainable practices and gear such as SCUBA spear-fishing and lay nets, within the context of nearshore ecosystems. | | | ✓ |
| 2.2.2.h Encourage the State to conduct a regular census of fish populations and monitor coral health. | | | ✓ |
| 2.2.2.i Encourage the State to significantly increase the number of park rangers, enforcement officers, and marine biologists to protect coastal resources. | | | ✓ |
| 2.2.2.j Encourage the State to prohibit the collection and exportation of fish, coral, algae, and other marine species for the ornamental and aquarium trade. | | | ✓ |
| **Objective:** | | | |
| 2.2.3 Water quality that meets or exceeds State Clean Water Act standards. | | ✓ | |
| **Policies:** | | | |
| 2.2.3.a Reduce the amount of impervious surface and devise site plan standards that aim to minimize storm runoff and NPS pollution. | | ✓ | |
| 2.2.3.b Support the revision of existing regulations to require an Erosion and Sedimentation Control Plan (ESCP) for development activities that may pose a threat to water quality. | | | ✓ |
| 2.2.3.c Require an on-site monitoring program, where applicable, when grading may pose a threat to water quality or when recommended in the ESCP. | | | ✓ |
| 2.2.3.d Avoid development actions that impair Maui's reef systems and remove identified stressors. | | ✓ | |
| 2.2.3.e Phase out cesspools and restrict the use of septic systems in ecologically sensitive coastal areas by converting to environmentally-friendly alternative sewage treatment systems, and connecting to central sewerage systems when and where feasible. | | ✓ | |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| 2.2.3.f Prohibit the development of new wastewater injection wells, except when unavoidable for public health and safety purposes. | | ✓ | |
| 2.2.3.g Ensure that the County upholds its affirmative duty under the Clean Water Act by monitoring and reducing point and NPS pollution to help safeguard coastal waters. | | ✓ | |
| **Objective:** | | | |
| 2.2.4 Acquire additional shoreline lands and shoreline access rights. | | | ✓ |
| **Policies:** | | | |
| 2.2.4.a Promote the use of conservation easements, land trusts, transfer and purchase of development rights, and mitigation banking. | | | ✓ |
| 2.2.4.b Require the dedication of public beach and rocky shoreline access ways to and along the shoreline where it serves a practical public interest as a condition of development or subdivision approval; future subdivisions and developments shall be consistent with and effectuate, to the extent practicable, the *Shoreline Access Inventory Update - Final Report* (March 2005), and its updates. | | | ✓ |
| 2.2.4.c Incorporate the *Shoreline Access Inventory Update - Final Report* (March 2005), and its regular updates, into this plan. | | | ✓ |
| 2.2.4.d Identify access points while further acquiring key shoreline parcels and easement rights to enhance and protect beach access and shoreline recreation. | | | ✓ |
| ***Analysis:* The proposed project is indirectly applicable to the goal, objective, and policies to protect shoreline, reefs, and nearshore waters. The proposed project will relocate the wastewater treatment facility and absorption field offsite, approximately 0.25 mile from the shoreline to avoid impacts to the nearshore marine environment. The proposed project will phase out use of the existing cesspool to dispose treated effluent and replace it with the absorption field. Drainage improvements will be carried out to control runoff and pollution.** | | | |
| **WATERSHEDS, STREAMS, AND WETLANDS ISSUES** | | | |
| **Goal:** | | | |
| 2.3 Healthy watersheds, streams, and riparian environments. | | ✓ | |
| **Objective:** | | | |
| 2.3.1 Greater protection and enhancement of watersheds, streams, and riparian environments. | | ✓ | |
| **Policies:** | | | |
| 2.3.1.a All present and future watershed management plans shall incorporate concepts of ahupuaʻa management based on the interconnectedness of upland and coastal ecosystems/species. | | | ✓ |
| 2.3.1.b Continue to support and be an active member of watershed partnerships. | | | ✓ |
| 2.3.1.c Support the establishment of regional water trusts, composed of public and private members, to manage water resources. | | | ✓ |
| 2.3.1.d Support regulations to require developments to utilize ahupuaʻa management practices. | | | ✓ |
| 2.3.1.e Work with private and non-profit entities to educate the public about the connection between upland activities within the watershed and the impacts on nearshore ecosystems and coral reefs. | | | ✓ |

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|---|---|---|---|
| 2.3.1.f Provide adequate funding and staff to develop and implement watershed protection plans and policies, including acquisition and management of watershed resources and land. | | | ✓ |
| 2.3.1.g Encourage the State to mandate instream assessment to provide adequate water for native species. | | | ✓ |
| 2.3.1.h Maui will protect all watersheds and streams in a manner that guarantees a healthy, sustainable riparian environment. | | ✓ | |
| **Objective:** | | | |
| 2.3.2 Decreased NPS and point source pollution. | | ✓ | |
| **Policies:** | | | |
| 2.3.2.a Enforce water pollution related standards and codes. | | | ✓ |
| 2.3.2.b Support the use of LID Techniques such as those described in the State of Hawai‘i LID Practitioner’s Guide (June 2006), as amended. | | ✓ | |
| 2.3.2.c Encourage farmers and ranchers to use agricultural BMPs to address NPS pollution. | | | ✓ |
| **Objective:** | | | |
| 2.3.3 Preserve existing wetlands and improve and restore degraded wetlands. | | | ✓ |
| **Policies:** | | | |
| 2.3.3.a Prohibit the destruction and degradation of existing upland, mid-elevation, and coastal wetlands. | | | ✓ |
| 2.3.3.b Support and fund wetland protection and improvement, and restoration of degraded wetlands. | | | ✓ |
| 2.3.3.c Where applicable, require developers to provide a wetland protection buffer and/or other protective measures around and between development and wetland resources. | | | ✓ |
| **Objective:** | | | |
| 2.3.4 Greater preservation of native flora and fauna biodiversity to protect native species. | | ✓ | |
| **Policies:** | | | |
| 2.3.4.a Work with appropriate agencies to eliminate feral ungulate populations and invasive species. | | | ✓ |
| 2.3.4.b Encourage the State to provide adequate funding to preserve biodiversity, protect native species, and contain or eliminate invasive species. | | | ✓ |
| 2.3.4.c Support the work of conservation groups and organizations that protect, reestablish, manage, and nurture sensitive ecological areas and threatened indigenous ecosystems. | | | ✓ |
| **Objective:** | | | |
| 2.3.5 Limited development in critical watershed areas. | | | ✓ |
| **Policies:** | | | |
| 2.3.5.a Discourage development and subdivision of land within critical watersheds and in areas susceptible to high erosion and sediment loss. | | | ✓ |

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|---|---|---|---|
| 2.3.5.b Designate critical watershed areas as conservation lands. | | | ✓ |
| 2.3.5.c Strongly encourage new subdivisions and developments that are proximate to environmentally sensitive watershed resources to prepare and implement CSD plans. | | | ✓ |
| **Objective:** | | | |
| 2.3.6 Enhance the vitality and functioning of streams, while balancing the multiple needs of the community. | | | ✓ |
| **Policies** | | | |
| 2.3.6.a Protect and enhance natural streambeds and discourage stream alteration. | | | ✓ |
| 2.3.6.b Work with appropriate agencies to establish minimum stream flow levels and ensure adequate stream flow to sustain riparian ecosystems, traditional kalo cultivation, and self-sustaining ahupuaʻa. | | | ✓ |
| 2.3.6.c Respect and participate in the resolution of native Hawaiian residual land and water rights issues (kuleana lands, ceded lands, and historic agricultural and gathering rights). | | | ✓ |
| 2.3.6.d Ensure that stream flows implement laws and policies found in the State Constitution and Water Code. | | | ✓ |
| 2.3.6.e Work with appropriate agencies and stakeholders to establish minimum stream flow levels, promote actions to support riparian habitat and the use of available loʻi, and maintain adequate flows for the production of healthy kalo crops. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater upgrades at the Helene Hall and is indirectly applicable to the goal, objective and policies related to healthy watersheds, streams, and wetlands. The proposed project will eliminate the use of a cesspool in proximity to Hāna Bay and relocate the absorption field, upslope to the Hāna Ball Park, approximately 0.25 mile from the shoreline. The proposed sewage treatment facility and new absorption field will improve the quality of wastewater discharge and help protect downstream resources. A flora and fauna study was carried out to ensure native and endangered species are protected.** | | | |
| **WILDLIFE AND NATURAL AREAS** | | | |
| **Goal:** | | | |
| 2.4 Maui's natural areas and indigenous flora and fauna will be protected. | | ✓ | |
| **Objective:** | | | |
| 2.4.1 A comprehensive management strategy that includes further identification, protection, and restoration of indigenous wildlife habitats. | | | ✓ |
| **Policies:** | | | |
| 2.4.1.a Identify and inventory the following: | | | ✓ |
| (1) Natural, recreational, and open space resources; | | | ✓ |
| (2) Flora and fauna with medium, high, and very high concentrations of threatened or endangered species; and | | ✓ | |
| (3) Location and extent of invasive species. | | ✓ | |

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|---|---|---|---|
| 2.4.1.b Require flora and fauna assessment and protection plans for development in areas with concentrations of indigenous flora and fauna; development shall comply with the assessment and protection plan and shall use the avoidance, minimization, and mitigation approach respectively, with an emphasis on avoidance. | | ✓ | |
| 2.4.1.c Support the implementation of Hawai`i's Comprehensive Wildlife Conservation Strategy (October 2005). | | | ✓ |
| **Objective:** | | | |
| 2.4.2 A decrease in invasive species through programs and partnerships that eradicate undesirable species and protect native habitat. | | | ✓ |
| **Policies:** | | | |
| 2.4.2.a Prevent the introduction of invasive species at all of Maui's airports and harbors. | | | ✓ |
| 2.4.2.b Encourage the State to increase funding in support of invasive species interception, control, and eradication. | | | ✓ |
| 2.4.2.c Encourage the State to develop programs that allow students to participate in invasive species eradication projects. | | | ✓ |
| **Objective:** | | | |
| 2.4.3 Greater protection of sensitive lands, indigenous habitat, and native flora and fauna. | | ✓ | |
| **Policies:** | | | |
| 2.4.3.a Secure an interconnected network of sensitive lands, greenways, watercourses, and habitats. | | | ✓ |
| 2.4.3.b Protect Maui's sensitive lands (see Sensitive Lands on Protected Areas Diagrams). | | | ✓ |
| 2.4.3.c Promote innovative environmental-planning methods and site-planning standards that preserve and re-establish indigenous flora and fauna habitat, to preserve and restore connected habitat corridors and open space. | | | ✓ |
| 2.4.3.d Utilize protection tools such as conservation easements, land trusts, land banks, Purchase of Developments Rights (PDRs), Transfer of Development Rights (TDRs), and other stewardship tools to acquire natural areas | | | ✓ |
| 2.4.3.e Encourage discussions with communities to designate heritage areas that protect recreational and cultural lifestyles and resources. | | | ✓ |
| 2.4.3.f Support the expansion of Haleakalā National Park, and the creation of new national parks, where appropriate and supported by local communities. | | | ✓ |
| 2.4.3.g Encourage reforestation efforts that increase native species' habitat. | | | ✓ |
| 2.4.3.h Utilize the Natural Area Partnership Program (NAPP) and other programs to protect natural lands. | | | ✓ |
| 2.4.3.i Support increased dedicated funding for the acquisition, protection, restoration, or preservation of important natural areas or open space through the following: grants from the Land and Water Conservation Fund; dedicated funding from real property taxes or other appropriate revenues; bond issues; real estate transfer tax; revenues from the Transient Accommodations Tax; development mitigation fees; and other appropriate funding sources. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed project is indirectly applicable to the goal, objective, and policies to protect Maui's natural areas and indigenous flora and fauna. The proposed relocation of the wastewater treatment facility and absorption field to the Hāna Ball Park will protect the natural area of Hāna Bay and the nearshore marine environment from potential adverse wastewater impacts. A flora and fauna study was carried out for the proposed project to ensure indigenous, rare, and endangered flora and fauna are not adversely impacted.** | | | |
| **SCENIC RESOURCES** | | | |
| **Goal:** | | | |
| 2.5 Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents' quality of life, attract visitors, provide a connection to the past, and promote a sense of place. | | ✓ | |
| **Objective:** | | | |
| 2.5.1 A greater level of protection for scenic resources. | | ✓ | |
| **Policies:** | | | |
| 2.5.1.a Protect views to include, but not be limited to, Haleakalā, ʻĪao Valley, the Mauna Kahalawai (West Maui Mountains), Puʻu Ōʻlaʻi, Kahoʻolawe, Molokini, Molokaʻi, and Lānaʻi, Mauna Kea, Mauna Loa, sea stacks, the Pacific Ocean, and significant water features, ridgelines, and landforms. | | ✓ | |
| 2.5.1.b Identify, preserve, and provide ongoing management of important scenic vistas and open space resources, including mauka-to-makai and makai-to-mauka view planes. | | | ✓ |
| 2.5.1.c Protect "night sky" resources by encouraging the implementation of ambient light ordinances and encouraging conversion of all sources that create excessive light pollution, affecting our ability to view the stars. | | ✓ | |
| 2.5.1.d Protect ridgelines from development where practicable to facilitate the protection of public views. | | | ✓ |
| 2.5.1.e Protect scenic resources along Maui's scenic roadway corridors. | | | ✓ |
| **Objective:** | | | |
| 2.5.2. Reduce impacts of development projects and public-utility improvements on scenic resources. | | ✓ | |
| **Policies:** | | | |
| 2.5.2.a Enforce the policies and guidelines of the SMA regarding the protection of views. | | ✓ | |
| 2.5.2.b Require any new subdivision of land, development, or redevelopment adjacent to a "high" or "exceptional" scenic corridor to submit an impact assessment of the project's scenic impacts; this assessment shall use the avoidance, minimization, and mitigation steps respectively, with an emphasis on avoidance. | | | ✓ |
| 2.5.2.c Require appropriate building setbacks and limits on wall heights to protect views along scenic corridors. | | | ✓ |
| 2.5.2.d Encourage the State of Hawai`i Board of Land and Natural Resources to deny any development within the State Conservation District that interferes with a scenic landscape or disrupts important open space resources. | | | ✓ |

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|---|---|---|---|
| 2.5.2.e Require Urban Design and Review Board (UDRB) review and approval of utility poles, facilities, and other visible infrastructure improvements along scenic corridors. | | ✓ | |
| 2.5.2.f Ensure little or no effect on scenic resources from utility improvements, primarily power poles. | | | ✓ |
| 2.5.2.g Protect scenic vistas from intrusion by power poles. | | | ✓ |
| **Objective:** | | | |
| 2.5.3 Greater protection of and access to scenic vistas, access points, and scenic lookout points. | | ✓ | |
| **Policy:** | | | |
| 2.5.3.a Protect, enhance, and acquire access to Maui's scenic vistas and resources. | | ✓ | |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is indirectly applicable to the goal, objective, and policies to protect scenic resources. The proposed wastewater treatment facility and absorption field will be located outside the shoreline and coastal area at the Hāna Ball Park to maintain the scenic coastal resources. All outdoor lighting for the proposed project will be shielded and directed downward to protect the night sky resources. Adverse impacts to scenic resources are not anticipated from the proposed action.** | | | |
| **CHAPTER 3 – NATURAL HAZARDS** | | | |
| **Goal:** | | | |
| 3.1 Maui will be disaster resilient. | | ✓ | |
| **Objective:** | | | |
| 3.1.1 Increased inter-agency coordination. | | | ✓ |
| **Policy:** | | | |
| 3.1.1.a Reinforce the island's preparedness capacity by: | | | ✓ |
| (1) Applying the latest data-gathering techniques/technology; | | | ✓ |
| (2) Pursuing funding opportunities; | | | ✓ |
| (3) Improving monitoring and advance warning systems; | | | ✓ |
| (4) Fostering public awareness; and | | | ✓ |
| (5) Working with external agencies to coordinate disaster mitigation and response. | | | ✓ |
| **Objective:** | | | |
| 3.1.2 Greater protection of life and property. | | ✓ | |
| **Policies:** | | | |
| 3.1.2.a Identify critical infrastructure, lifelines, roads, and populations that are vulnerable to coastal hazards, and encourage strategic retreat and relocation to safer areas. | | ✓ | |

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|---|---|---|---|
| 3.1.2.b Consider the location of dams, reservoirs, holding ponds, and other water-containing entities that are upstream of inhabited areas to anticipate, avoid, and mitigate inundation risks, and discourage new development in areas where possible inundation hazards may exist. | | | ✓ |
| 3.1.2.c Strengthen current development standards to minimize destruction of land and property. | | | ✓ |
| 3.1.2.d Encourage the use of construction techniques that reduce the potential for damage from natural hazards. | | | ✓ |
| 3.1.2.e Increase the County's resilience to drought. | | | ✓ |
| 3.1.2.f Increase food and energy security through local production and storage. | | | ✓ |
| **Objective:** | | | |
| 3.1.3 A more coordinated emergency response system that includes clearly defined and mapped evacuation routes. | | | ✓ |
| **Policy:** | | | |
| 3.1.3.a Identify and expand shelter facilities and evacuation routes away from areas susceptible to natural hazards. | | | ✓ |
| **Objective:** | | | |
| 3.1.4 A more educated and involved public that is aware of and prepared for natural hazards. | | | ✓ |
| **Policies:** | | | |
| 3.1.4.a Promote public education and involvement related to natural hazards awareness and preparedness. | | | ✓ |
| 3.1.4.b Coordinate a multi-agency effort to establish and promote a comprehensive public education program that will focus on practical approaches to preparedness, damage prevention, and hazard mitigation. | | | ✓ |
| ***Analysis:*** **The proposed project is indirectly applicable to the goal, objective, and policies to greater protection of life and property from natural disasters. The proposed wastewater treatment facility and absorption field will be located offsite, away from the shoreline to ensure the proposed improvements will not be adversely affected by coastal-related hazards.** | | | |
| **CHAPTER 4 – ECONOMIC DEVELOPMENT** | | | |
| **ECONOMIC DIVERSIFICATION** | | | |
| **Goal:** | | | |
| 4.1 Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island's unique natural and cultural resources. | | | ✓ |
| **Objective:** | | | |
| 4.1.1 A more diversified economy. | | | ✓ |
| **Policies:** | | | |
| 4.1.1.a Encourage an economy that is driven by innovation, research and development, and human resource development, including but not limited to, increasing technology- and knowledge-based sectors to be a major component in Maui County's economic base. | | | ✓ |

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|---|---|---|---|
| 4.1.1.b Support the creation of new jobs and industries that provide a living wage. | | | ✓ |
| 4.1.1.c Facilitate and expedite permits and approvals. | | | ✓ |
| 4.1.1.d Develop linkages and partnerships among international research and development activities and Maui businesses. | | | ✓ |
| **Objective:** | | | |
| 4.1.2 Increase activities that support principles of sustainability. | | | ✓ |
| **Policies:** | | | |
| 4.1.2.a Support industries that are sustainable, and culturally and environmentally sensitive. | | | ✓ |
| 4.1.2.b Encourage and support local businesses. | | | ✓ |
| 4.1.2.c Substitute imports with locally-produced services and products where practicable. | | | ✓ |
| 4.1.2.d Support the development of economic development clusters in targeted industry sectors. | | | ✓ |
| 4.1.2.e Encourage all businesses to save energy, water, and other resources. | | | ✓ |
| **Objective:** | | | |
| 4.1.3 Improve the island's business climate. | | | ✓ |
| **Policies:** | | | |
| 4.1.3.a Upgrade, maintain the quality of, and improve access to telecommunications infrastructure. | | | ✓ |
| 4.1.3.b Ensure an adequate supply of affordable workforce housing. | | | ✓ |
| 4.1.3.c Develop neighborhoods and communities that are attractive to the workforce of a diversified economy. | | | ✓ |
| 4.1.3.d Encourage, nurture, and reward entrepreneurship and innovation. | | | ✓ |
| 4.1.3.e Encourage employers to establish incentive programs. Support flexibility in workforce policies compatible with business and quality of life goals. | | | ✓ |
| 4.1.3.f Assist community development organizations with revitalization and development of neighborhoods and communities that are attractive to the workforce of a diversified economy. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not directly or indirectly applicable to the goal, objective, and policies related to economic diversification.** | | | |
| **TOURISM** | | | |
| **Goal:** | | | |
| 4.2 A healthy visitor industry that provides economic well-being with stable and diverse employment opportunities. | | | ✓ |

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|---|---|---|---|
| **Objective:** | | | |
| 4.2.1 Increase the economic contribution of the visitor industry to the island's environmental well-being for the island's residents' quality of life. | | | ✓ |
| **Policies:** | | | |
| 4.2.1.a Engage the visitor industry in the growth of emerging sectors where practicable. | | | ✓ |
| 4.2.1.b Support the implementation of the Maui County TSP, when consistent with the MIP. | | | ✓ |
| 4.2.1.c Focus economic growth in the visitor industry through enhanced visitor experiences and an emphasis on attracting higher-spending. | | | ✓ |
| 4.2.1.d Provide a rich visitor experience, while protecting the island's natural beauty, culture, lifestyles, and aloha spirit. | | | ✓ |
| 4.2.1.e Diversify the tourism industry by supporting appropriate niche activities such as ecotourism, cultural tourism, voluntourism, ag-tourism, health and wellness tourism, educational tourism, medical tourism, and other viable tourism-related businesses in appropriate locations. | | | ✓ |
| 4.2.1.f Recognize the important economic contributions that the visitor industry makes and support a healthy and vibrant visitor industry. | | | ✓ |
| 4.2.1.g Support the increased availability of kamaʻāina discount programs. | | | ✓ |
| **Objective:** | | | |
| 4.2.2 Comprehensively manage future visitor-unit expansion. | | | ✓ |
| **Policies:** | | | |
| 4.2.2.a Mitigate the impact of tourism on the host culture, natural environment, and resident lifestyles. | | | ✓ |
| 4.2.2.b Allow, where permitted by the community plan, the development of business hotels and small, sensitively-designed inns. | | | ✓ |
| 4.2.2.c Manage impacts from transient vacation rentals, hotels, bed and breakfast units, timeshares, and resort condominiums on residential communities, public infrastructure, and community facilities. | | | ✓ |
| 4.2.2.d Discourage supplanting of existing island housing to visitor accommodations that may have a negative impact on long-term rental housing, price of housing, and price of land. | | | ✓ |
| 4.2.2.e Allow the designation of retreat/mini-conference centers in appropriate locations through the community plan process. | | | ✓ |
| 4.2.2.f Community plans should consider establishing standards such as limits on building size, room count, and the number of inns, if any, that will be allowed in small towns. | | | ✓ |
| **Objective:** | | | |
| 4.2.3 Maximize residents' benefits from the visitor industry. | | | ✓ |
| **Policies:** | | | |
| 4.2.3.a Promote a desirable island population by striving to not exceed an island-wide visitor population of roughly 33 percent of the resident population. | | | ✓ |

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|---|---|---|---|
| 4.2.3.b Use the required General Plan Annual Status Report to monitor trends related to residents and visitors. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the goal, objective, and policies related to diversify the tourism industry.** | | | |
| **AGRICULTURE** | | | |
| **Goal:** | | | |
| 4.3 Maui will have a diversified agricultural industry contributing to greater economic, food, and energy security and prosperity. | | | ✓ |
| **Objective:** | | | |
| 4.3.1 Strive for at least 85 percent of locally-consumed fruits and vegetables and 30 percent of all other locally-consumed foods to be grown in-State. | | | ✓ |
| **Policies:** | | | |
| 4.3.1.a Strive to substitute food/agricultural product imports with a reliable supply of locally produced food and agricultural products. | | | ✓ |
| 4.3.1.b Facilitate and support the direct marketing/sale of the island's agricultural products to local consumers, through farmers markets and similar venues. | | | ✓ |
| 4.3.1.c Encourage growing a diverse variety of crops and livestock to ensure the stewardship of our land while safeguarding consumer safety. | | | ✓ |
| 4.3.1.d Work with the State to regulate and monitor genetically-modified-organism (GMO) crops to ensure the safety of all crops and label all GMO products. | | | ✓ |
| **Objective:** | | | |
| 4.3.2 Maintain or increase agriculture's share of the total island economy. | | | ✓ |
| **Policies:** | | | |
| 4.3.2.a Encourage the export of the island's agricultural products to offshore markets. | | | ✓ |
| 4.3.2.b Support infrastructure investments at harbors, such as ferry service, airports, and other facilities for the rapid and cost-effective export of island-grown products. | | | ✓ |
| 4.3.2.c Encourage the continued viability of sugar cane production, or other agricultural crops, in central Maui and all of Maui Island. | | | ✓ |
| 4.3.2.d Work with the State to reduce excise taxes for commercial agricultural products produced within the State. | | | ✓ |
| 4.3.2.e Coordinate with appropriate State and Federal Departments and agencies, private shipping companies, and farmers associations to assist in the rapid and cost-effective export of Maui's agricultural products to off-island markets. | | | ✓ |
| **Objective:** | | | |
| 4.3.3 Expand diversified agriculture production at an average annual rate of 4 percent. | | | ✓ |
| **Policies:** | | | |
| 4.3.3.a Promote the development of locally-grown and ecologically-sound biofuels, aquaculture, and forest products. | | | ✓ |
| 4.3.3.b Support the development of farming associations/cooperatives. | | | ✓ |

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|---|---|---|---|
| 4.3.3.c Work with educational institutions and appropriate agencies to provide education and training for farm owners and entrepreneurs. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to diversified agriculture.** | | | |
| **EMERGING SECTORS** | | | |
| **Goal:** | | | |
| 4.4 A diverse array of emerging economic sectors. | | | ✓ |
| **Objective:** | | | |
| 4.4.1 Support increased investment and expanded activity in emerging industries. | | | ✓ |
| **Policies:** | | | |
| 4.4.1.a Support the development of and access to state-of-the-art voice, video, and data telecommunications systems and high-speed Internet. | | | ✓ |
| 4.4.1.b Attract and assist industries to compete in high technology activities such as those related to renewable energy, green technologies, diversified agriculture, ocean sciences, health sciences, space technologies, and other knowledge-based industries. | | | ✓ |
| 4.4.1.c Support new industries that are environmentally and culturally sensitive such as health and wellness, sports and outdoor activities, cultural activities, the arts, film-making, entertainment, and digital media. | | | ✓ |
| 4.4.1.d Support a sustainable, culturally sensitive, astronomy industry. | | | ✓ |
| 4.4.1.e Support the continued development of the Maui Research and Technology Park in Kihei, as a center for research and development, education, and diversified economic development, as provided by the Maui County Code. | | | ✓ |
| 4.4.1.f Work with appropriate organizations to support the development of high technology clusters around renewable energy, diversified agriculture, ocean sciences, health sciences, and other knowledge-based industries. | | | ✓ |
| **Objective:** | | | |
| 4.4.2 Increase the development of renewable energy technologies that are supported by the local community. | | | ✓ |
| **Policies:** | | | |
| 4.4.2.a Support the expansion of the renewable energy sector and the use of solar, wind, wave, and biofuel technologies. | | | ✓ |
| 4.4.2.b Provide incentives to encourage renewable energy development, the use of green energy technologies, and energy conservation. | | | ✓ |
| 4.4.2.c Ensure an adequate supply of land and facilitate permitting to meet the needs for renewable energy technologies such as solar, wind, wave, biofuel, and other technologies, provided that environmental, view plane, and cultural impacts are addressed. | | | ✓ |
| 4.4.2.d Support the Maui County Energy Alliance Plan where consistent with the MIP. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies to diversify the array of economic sectors.** | | | |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **SMALL BUSINESS DEVELOPMENT** | | | |
| **Goal:** | | | |
| 4.5 Small businesses will play a key role in Maui's economy. | | | ✓ |
| **Objective:** | | | |
| 4.5.1 Increase the number of and revenue generated by small businesses and decrease the percentage of small business failures. | | | ✓ |
| **Policies:** | | | |
| 4.5.1.a Provide incentives and support for small businesses and entrepreneurs that incorporate sustainable technologies and practices into their operations, utilize local materials, or produce and sell locally-made goods or services. | | | ✓ |
| 4.5.1.b Assist traditional "mom and pop" business establishments. | | | ✓ |
| 4.5.1.c Reduce barriers to small business development. | | | ✓ |
| 4.5.1.d Require, where feasible, the government procurement of goods and services from locally-owned, small businesses. | | | ✓ |
| 4.5.1.e Support community markets and venues that sell locally-made produce, goods, and services. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the goal, objective, and policies related to small business development. It is noted, however, that during construction, the proposed project will support local business through purchases of goods and services.** | | | |
| **HEALTH CARE SECTOR** | | | |
| **Goal:** | | | |
| 4.6 Maui will have a health care industry and options that broaden career opportunities that are reliable, efficient, and provide social well-being. | | | ✓ |
| **Objective:** | | | |
| 4.6.1 Expand the economic benefits of the health care sector. | | | ✓ |
| **Policies:** | | | |
| 4.6.1.a Encourage expanded services at MMMC and at other medical facilities. | | | ✓ |
| 4.6.1.b Support expansion of federally qualified health centers with the direct involvement of the residents of the communities served. | | | ✓ |
| 4.6.1.c Support the use of multimedia as a means to provide healthcare information. | | | ✓ |
| 4.6.1.d Encourage digitalization of all diagnostic equipment at all facilities on Maui to enable sharing of data and more efficient use of limited provider workforce, consistent with data protection and patient privacy. | | | ✓ |
| 4.6.1.e Support the expansion of telemedicine. | | | ✓ |
| 4.6.1.f Encourage expansion and improved access to emergency care in all communities. | | | ✓ |
| **Objective:** | | | |
| 4.6.2 Be more efficient in the delivery of health care services and in minimizing health care costs. | | | ✓ |

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| **Policies:** | | | |
| 4.6.2.a Support expansion of health care providers and facilities to improve access to quality care throughout the island. | | | ✓ |
| 4.6.2.b Encourage the expansion of veteran health care services. | | | ✓ |
| 4.6.2.c Allow home-based out-patient medical care that does not interfere with surrounding neighborhoods. | | | ✓ |
| **Objective:** | | | |
| 4.6.3. Expand Maui's alternative health care services, including spiritual practices. | | | ✓ |
| **Policies:** | | | |
| 4.6.3.a Support efforts to promote alternative medicine. | | | ✓ |
| 4.6.3.b Allow small-scale home-alternative medicine businesses such as massage, chiropractic care, traditional Hawaiian healing, and acupuncture that do not interfere with surrounding neighborhoods. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to alternative health care services.** | | | |
| **EDUCATION AND WORKFORCE DEVELOPMENT** | | | |
| **Goal:** | | | |
| 4.7 Maui will have effective education and workforce development programs and initiatives that are aligned with economic development goals. | | | ✓ |
| **Objective:** | | | |
| 4.7.1 Improve preschool and K-12 education to allow our youth to develop the skills needed to successfully navigate the 21st century. | | | ✓ |
| **Objective:** | | | |
| 4.7.1.a Encourage the State to implement programs such as: | | | ✓ |
| (1) Universally available preschool for children between the ages of one and five; | | | ✓ |
| (2) Mandatory kindergarten; | | | ✓ |
| (3) Mandatory K-5th grade classroom size limits of 1 teacher to 20 students; | | | ✓ |
| (4) Mandatory nutrition programs; and | | | ✓ |
| (5) Mandatory Native Hawaiian programs at all grade levels. | | | ✓ |
| 4.7.1.b Encourage the DOE to extend the school day by at least an hour. | | | ✓ |
| 4.7.1.c Encourage the State to increase funding for public education so that Hawai'i is among the top 10 states nationally as measured by investment per pupil. | | | ✓ |
| 4.7.1.d Encourage the State to ensure teacher certifications relate to effective delivery and improved student performances, and develop an industry experience/equivalency certification to assure our DOE students have access to career technical education and training. | | | ✓ |

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|---|---|---|---|
| 4.7.1.e Encourage the UHMC to provide dormitory space for high school students. | | | ✓ |
| 4.7.1.f Encourage the development and implementation of curriculum on native Hawaiian history, culture, and practices, in consultation with native Hawaiian groups and associations. | | | ✓ |
| **Objective:** | | | |
| 4.7.2 Encourage an increase in the number of certificate recipients and associate, bachelors, and graduate degrees conferred. | | | ✓ |
| **Policies:** | | | |
| 4.7.2.a Encourage the State to increase the number of articulation agreements between the UHMC and four-year universities, particularly the University of Hawai‘i at Manoa. | | | ✓ |
| 4.7.2.b Encourage the State to expand accredited 2-year, 4-year, and graduate programs through the UHMC. | | | ✓ |
| 4.7.2.c Encourage the education and training of our residents to meet the needs of a diversified economy. | | | ✓ |
| 4.7.2.d Support education and training programs such as student internships, vocational training, and career development opportunities to ensure a highly skilled workforce | | | ✓ |
| 4.7.2.e Work with educational institutions to improve and expand access to education and training through multiple modes, including distance learning. | | | ✓ |
| **Objective:** | | | |
| 4.7.3 Strive to ensure that more of Maui’s jobs are developed in STEM-related sectors by 2030. | | | ✓ |
| **Policies:** | | | |
| 4.7.3.a Support the development of STEM-related certificates and degrees at the two- and four year levels. | | | ✓ |
| 4.7.3.b Support the education initiatives of the Maui Agricultural Development Plan. | | | ✓ |
| 4.7.3.c Expand and seek funding for internships, mentoring, job shadowing, etc. to foster interest in health and green workforce careers. | | | ✓ |
| 4.7.3.d Work with MEDB, UHMC, and other similar organizations to expand internship/education programs to support STEM careers. | | | ✓ |
| 4.7.3.e Continue to partner with the MEDB and other similar organizations to recruit, assist, and retain emerging industries, research and development activities, and educational/workforce opportunities. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not directly or indirectly applicable to the goal, objective, and policies to education and workforce development.** | | | |
| **CHAPTER 5 – HOUSING** | | | |
| **Goal:** | | | |
| 5.1 Maui will have safe, decent, appropriate, and affordable housing for all residents developed in a way that contributes to strong neighborhoods and a thriving island community. | | | ✓ |

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|---|---|---|---|
| **Objective:** | | | |
| 5.1.1 More livable communities that provide for a mix of housing types, land uses, income levels, and age. | | | ✓ |
| **Policies:** | | | |
| 5.1.1.a Promote livable communities (compact/walkable/bikeable, access to transit) that provide for a mix of housing types and land uses, including parks, open space, and recreational areas. | | | ✓ |
| 5.1.1.b Promote planning approaches that provide a mix of multifamily and single-family housing units to expand housing choices. | | | ✓ |
| 5.1.1.c Discourage gated communities. | | | ✓ |
| 5.1.1.d Provide incentives for the rehabilitation or adaptive reuse of historic structures to facilitate more housing choices. | | | ✓ |
| 5.1.1.e Use planning and regulatory approaches to provide higher housing densities. | | | ✓ |
| **Objective:** | | | |
| 5.1.2 Better monitoring, evaluation, and refinement of affordable housing policy in conjunction with the economic cycle. | | | ✓ |
| **Policies:** | | | |
| 5.1.2.a Improve data on resident and nonresident housing. | | | ✓ |
| 5.1.2.b Utilize the following approaches to promote resident housing and to minimize offshore market impacts: | | | ✓ |
| (1) Ensure that the future housing stock is composed of a mix of housing types (multifamily, small lots, ohana units, co-housing, cottage houses, etc.); | | | ✓ |
| (2) Encourage new housing in proximity to jobs and services, in places that are conducive/affordable to island residents; and | | | ✓ |
| (3) Explore taxation alternatives and building fee structures. | | | ✓ |
| **Objective:** | | | |
| 5.1.3 Provide affordable housing, rental or in fee, to the broad spectrum of our island community. | | | ✓ |
| **Policies:** | | | |
| 5.1.3.a Consider regulations that can help keep affordable housing available at affordable rents. | | | ✓ |
| 5.1.3.b Seek to have ownership of affordable for-sale and rental housing vested in a non-profit community land trust, or other qualified housing provider, committed to keeping such housing affordable in perpetuity. | | | ✓ |
| 5.1.3.c Facilitate the use of public lands in urban areas that are suitable for affordable housing. | | | ✓ |
| 5.1.3.d Develop or support partnerships and initiatives that provide housing-related education/outreach. | | | ✓ |
| 5.1.3.e Support the continuing efforts of the County and its community partners to: | | | ✓ |

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|---|---|---|---|
| (1) Disseminate information on different housing/financial assistance programs (loans, grants, etc.) including information on housing rehabilitation/restoration/adaptive reuse; | | | ✓ |
| (2) Provide housing-related counseling including budget, credit, and financial planning assistance; and | | | ✓ |
| (3) Create and maintain a comprehensive/master list of available affordable housing to help residents secure a unit that satisfies their need. | | | ✓ |
| **Objective:** | | | |
| 5.1.4 Provide infrastructure in a more timely manner to support the development of affordable housing. | | | ✓ |
| **Policies:** | | | |
| 5.1.4.a Prioritize the development of infrastructure that supports the development of affordable housing. | | | ✓ |
| 5.1.4.b Utilize appropriate financing approaches and assistance tools to encourage the development of infrastructure and public facilities. | | | ✓ |
| 5.1.4.c Tailor infrastructure requirements to correspond with appropriate level-of-service standards to help control housing costs and to maintain safety. | | | ✓ |
| **Objective:** | | | |
| 5.1.5 A wider range of affordable housing options and programs for those with special needs. | | | ✓ |
| **Policies:** | | | |
| 5.1.5.a Ensure that residents with special needs have access to appropriate housing. | | | ✓ |
| 5.1.5.b Encourage housing to be built or rehabilitated to allow the elderly and those with special needs to live in their homes. | | | ✓ |
| 5.1.5.c Ensure and facilitate programs to assist those with special needs from becoming homeless. | | | ✓ |
| 5.1.5.d Promote programs that stimulate the production of sustainable homeless shelters and alternative housing technologies. | | | ✓ |
| 5.1.5.e Support programs that offer home modification counseling on low-interest retrofit loans and grants to those with special needs. | | | ✓ |
| **Objective:** | | | |
| 5.1.6 Reduce the cost to developers of providing housing that is affordable to families with household incomes 160 percent and below of annual median income. | | | ✓ |
| **Policies:** | | | |
| 5.1.6.a Support fast-track processing procedures for the following housing-related entitlements: affordable housing projects/units; indigenous Hawaiian housing/units; and special-needs housing units (seniors, disabled, homeless, etc.). | | | ✓ |
| 5.1.6.b Require the construction of affordable for-sale and rental housing units as part of the construction of new housing developments. | | | ✓ |
| 5.1.6.c Offer extra incentives in boom periods and withdraw incentives during slack periods. | | | ✓ |

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|---|---|---|---|
| **Objective:** | | | |
| 5.1.7 Increased preservation and promotion of indigenous Hawaiian housing and architecture. | | | ✓ |
| **Policies:** | | | |
| 5.1.7.a Preserve, promote, and give priority to Hawaiian housing/architecture forms to preserve Hawaiian culture. | | | ✓ |
| 5.1.7.b Provide for indigenous architecture as an allowable structure for native Hawaiian uses to include hula and lāʻau lapaʻau. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the goal, objective, and policies related to housing.** | | | |
| **CHAPTER 6 – INFRASTRUCTURE AND PUBLIC FACILITES** | | | |
| **SOLID WASTE** | | | |
| **Goal:** | | | |
| 6.1 Maui will have implemented the ISWMP thereby diverting waste from its landfills, extending their capacities. | | | ✓ |
| **Objective:** | | | |
| 6.1.1 Meet our future solid waste needs with a more comprehensive planning and management strategy. | | | ✓ |
| **Policies:** | | | |
| 6.1.1.a Update and publicize the ISWMP every ten years. | | | ✓ |
| 6.1.1.b Strengthen inter-agency coordination including Planning and Environmental Management departments. | | | ✓ |
| 6.1.1.c Divert waste from the landfills and educate the public about the recommendations of the ISWMP. | | | ✓ |
| 6.1.1.d Minimize future active, unlined landfill cells to the extent feasible. | | | ✓ |
| **Objective:** | | | |
| 6.1.2 Divert at least 60 percent of solid waste from the island's landfills. | | | ✓ |
| **Policies:** | | | |
| 6.1.2.a Require residents and commercial enterprises that generate waste to pay a fair proportion of disposal costs. | | | ✓ |
| 6.1.2.b Encourage environmentally safe waste-to-energy solutions. | | | ✓ |
| 6.1.2.c Facilitate the reduction of solid waste generated by packaging, food service products, construction waste, etc. | | | ✓ |
| 6.1.2.d Educate residents and visitors about the impacts of and methods to reduce, reuse, and recycle. | | | ✓ |
| 6.1.2.e Discourage the disposal of landfill leachate by diversion to wastewater treatment plants, where practicable. | | | ✓ |
| ***Analysis:*** **The proposed project is not directly or indirectly applicable to the goal, objective, and policies related to solid waste.** | | | |

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|---|---|---|---|
| **WASTEWATER** | | | |
| **Goal:** | | | |
| 6.2 Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible. | ✓ | | |
| **Objective:** | | | |
| 6.2.1 A wastewater planning program capable of efficiently providing timely and adequate capacity to service projected demand where economically feasible and practicable. | ✓ | | |
| **Policies:** | | | |
| 6.2.1.a Encourage the use of renewable energy in support of wastewater treatment facilities. | | | ✓ |
| 6.2.1.b Focus the expansion of wastewater systems to accommodate planned growth consistent with the MIP Directed Growth Strategy. | | | ✓ |
| 6.2.1.c Establish new wastewater treatment plant(s) outside the tsunami zone. | | | ✓ |
| **Objective:** | | | |
| 6.2.2 Adequate levels of wastewater service with minimal environmental impacts. | ✓ | | |
| **Policies:** | | | |
| 6.2.2.a Meet or exceed all State and Federal standards regulating wastewater disposal or reuse. | ✓ | | |
| 6.2.2.b Encourage tertiary treatment for all municipal wastewater that is disposed through deep injection wells. Phase out all municipal and private injection wells in coordination with water reuse programs, where feasible, by 2020. | | | ✓ |
| 6.2.2.c Improve and upgrade the County's existing wastewater collection, treatment, and reuse facilities consistent with current and future plans and the County's CIP. | ✓ | | |
| 6.2.2.d Maintain an ongoing sewer inspection program for public and private multi-user systems to identify potential problems and forecast each system's residual life. | | | ✓ |
| 6.2.2.e Require all new developments to fund system improvements in proportion to the development impact and in accordance with the County's wastewater functional plan. | | | ✓ |
| 6.2.2.f Require appropriate funding mechanisms, such as a sinking fund, to adequately maintain or replace aging water-system components. | | | ✓ |
| 6.2.2.g Strongly encourage the phase out of cesspools. | ✓ | | |
| **Objective:** | | | |
| 6.2.3 Increase the reuse of wastewater. | | | ✓ |
| **Policies:** | | | |
| 6.2.3.a Strengthen coordination between the Department of Water Supply (DWS) and the WWRD to promote reuse/recycling of wastewater. | | | ✓ |

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|---|---|---|---|
| 6.2.3.b Expand the reuse of wastewater from the Central Maui, Kīhei, Lahaina, and other wastewater systems. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is directly applicable to the goal, objective, and policies related to wastewater. The proposed project will provide treatment of wastewater at Helene Hall to meet or exceed Federal and State standards. The proposed project will phase out use of the existing cesspool and relocate the wastewater treatment facility and absorption field outside the tsunami inundation zone. The proposed project provides adequate levels of wastewater service with minimal environmental impacts.** | | | |
| **WATER** | | | |
| **Goal:** | | | |
| 6.3 Maui will have an environmentally sustainable, reliable, safe, and efficient water system. | | | ✓ |
| **Objective:** | | | |
| 6.3.1 More comprehensive approach to water resources planning to effectively protect, recharge, and manage water resources including watersheds, groundwater, streams, and aquifers. | | | ✓ |
| **Policies:** | | | |
| 6.3.1.a Ensure that DWS actions reflect its public trust responsibilities toward water. | | | ✓ |
| 6.3.1.b Ensure the WUDP implements the State Water Code and MIP's goals, objectives, and policies. | | | ✓ |
| 6.3.1.c Regularly update the WUDP, to maintain compliance with the General Plan. | | | ✓ |
| 6.3.1.d Ensure that the County's CIP for water-source development is consistent with the WUDP and the MIP. | | | ✓ |
| 6.3.1.e Where desirable, retain and expand public ownership and management of watersheds and fresh-water systems. | | | ✓ |
| 6.3.1.f Encourage and improve data exchange and coordination among Federal, State, County, and private land use planning and water resource management agencies. | | | ✓ |
| **Objective:** | | | |
| 6.3.2 Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs. | | | ✓ |
| **Policies:** | | | |
| 6.3.2.a Ensure the efficiency of all water system elements including well and stream intakes, water catchment, transmission lines, reservoirs, and all other system infrastructure. | | | ✓ |
| 6.3.2.b Encourage increased education about and use of private catchment systems where practicable for nonpotable uses. | | | ✓ |
| 6.3.2.c Maximize the efficient use of reclaimed wastewater to serve nonpotable needs. | | | ✓ |
| 6.3.2.d Work with appropriate State and County agencies to achieve a balance in resolving the needs of water users in keeping with the water allocation priorities of the MIP. | | | ✓ |

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| 6.3.2.e Ensure water conservation through education, incentives, and regulations. | | | ✓ |
| 6.3.2.f Acquire and develop additional sources of potable water. | | | ✓ |
| **Objective:** | | | |
| 6.3 Improve water quality and the monitoring of public and private water systems. | | | ✓ |
| **Policy:** | | | |
| 6.3.3.a Protect and maintain water delivery systems. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to water systems.** | | | |
| **TRANSPORTATION** | | | |
| **Goal:** | | | |
| 6.4 An interconnected, efficient, and well-maintained, multimodal transportation system. | | | ✓ |
| **Objective:** | | | |
| 6.4.1 Provide for a more integrated island-wide transportation and land use planning program that reduces congestion and promotes more efficient (transit-friendly) land use patterns. | | | ✓ |
| **Policies:** | | | |
| 6.4.1.a Plan for an integrated multi-modal transportation system comprised of public transit, bicycle, pedestrian, automobile, and other transportation modes. | | | ✓ |
| 6.4.1.b Refocus transportation investment from the construction of additional roadways only for the automobile to the expansion of a multimodal transportation system. | | | ✓ |
| 6.4.1.c Encourage the use of “complete streets” design methods. | | | ✓ |
| 6.4.1.d Encourage employers to implement TDM strategies. | | | ✓ |
| **Objective:** | | | |
| 6.4.2 Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network. | | | ✓ |
| **Policies:** | | | |
| 6.4.2.a Ensure transit-, roadway-, and pedestrian-facilities design and level-of-service standards respect the unique character of our communities. | | | ✓ |
| 6.4.2.b Prioritize transportation improvements list to cost-effectively meet existing and future needs consistent with the MIP. | | | ✓ |
| 6.4.2.c Require new development, where appropriate, to integrate sidewalks, pathways, bikeways, and transit infrastructure into new commercial and residential projects while enhancing community character. | | | ✓ |
| 6.4.2.d Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected. | | | ✓ |

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| 6.4.2.e Consider identification, acquisition where appropriate, and utilization of abandoned right of-ways for bikeways, pedestrian pathways, and open-space networks. | | | ✓ |
| 6.4.2.f Support the implementation of the *Central Maui Pedestrian & Bicycle Master Plan* (March 2012), when consistent with the MIP. | | | ✓ |
| **Objective:** | | | |
| 6.4.3 An island-wide, multimodal transportation system that respects and enhances the natural environment, scenic views, and each community's character. | | | ✓ |
| **Policies:** | | | |
| 6.4.3.a Ensure that the roadway and transit alignments respect the natural environment and scenic views. | | | ✓ |
| 6.4.3.b Ensure that roadways and transit systems in rural areas and small towns enhance community character. | | | ✓ |
| 6.4.3.c Design all transit systems to respect visual corridors and Maui's character. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to transportation.** | | | |
| **TRANSIT** | | | |
| **Goal:** | | | |
| 6.5 An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities. | | | ✓ |
| **Objective:** | | | |
| 6.5.1 An integrated transit system that better serves all mobility needs of Maui's residents and visitors. | | | ✓ |
| **Policies:** | | | |
| 6.5.1.a Maximize access to public transit in town centers, commercial districts, and employment centers. | | | ✓ |
| 6.5.1.b Expand regional and inter-regional transit services, where appropriate, in heavily traveled corridors and within communities | | | ✓ |
| 6.5.1.c Increase the frequency of current service, add additional bus routes as demand requires, and transition to nonpolluting transit vehicles, as funding permits. | | | ✓ |
| 6.5.1.d Provide adequate transit infrastructure (e.g., bus pullouts, waiting benches and shelters, signs) along existing and future transit right-of-ways. | | | ✓ |
| 6.5.1.e Require new development where appropriate, to provide right-of-ways (ROWs) to accommodate transit circulation and support facilities. | | | ✓ |
| 6.5.1.f Identify, protect, and preserve, or acquire corridors for future inter-community transit use, including but not limited to, rail and also multimodal use corridors. | | | ✓ |
| 6.5.1.g Establish transit corridors by planning for and securing right-of-way when appropriate for alternative modes of transportation (such as rail and water ferry service). | | | ✓ |
| 6.5.1.h Pursue improvements and upgrades to the existing transit system consistent with updated MDOT planning studies/transit plans (within the framework of comprehensive island-wide multimodal transportation plans). | | | ✓ |

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| 6.5.1.i Increase inter-agency coordination between the Department of Planning, State Department of Transportation, County Department of Public Works, and other applicable agencies. | | | ✓ |
| **Objective:** | | | |
| 6.5.2 Plan for a more diversified and stable funding base to support transportation goals. | | | ✓ |
| **Policies:** | | | |
| 6.5.2.a Support alternative methods and sources of funding transportation improvements (including impact fees, higher taxes, fare adjustments, dedicated sources of funding, and assessments). | | | ✓ |
| 6.5.2.b Collaborate with public-private entities or nonprofit organizations to reduce public transit operational expenses. | | | ✓ |
| 6.5.2.c Coordinate with appropriate Federal, State, and County agencies to fund transportation projects in areas where growth is anticipated. | | | ✓ |
| ***Analysis:*** **The proposed project is not applicable to the goal, objective, and policies related to transit.** | | | |
| **PARKS** | | | |
| **Goal:** | | | |
| 6.6 Maui will have a diverse range of active and passive recreational parks, wilderness areas, and other natural-resource areas linked, where feasible, by a network of greenways, bikeways, pathways, and roads that are accessible to all. | | ✓ | |
| **Objective:** | | | |
| 6.6.1 More effective, long-range planning of parks and recreation programs able to meet community needs. | | | ✓ |
| **Policies:** | | | |
| 6.6.1.a Support, consistent with the MIP, the implementation of open-space and recreational plans, such as the *Pali to Puamana Parkway* Master Plan and the *Upcountry Greenways Master Plan*. | | | ✓ |
| 6.6.1.b Utilize the ahupuaʻa approach by integrating mauka-to-makai natural landscapes into an island-wide parks and recreation functional plan. | | | ✓ |
| 6.6.1.c Provide a balanced mix of passive and active parks, including neighborhood, community, and regional parks, in each community plan area. | | | ✓ |
| 6.6.1.d Support the expansion of Haleakala National Park, where supported by affected communities. | | | ✓ |
| 6.6.1.e Support loʻi and dryland taro restoration in County, State, and Federal parks. | | | ✓ |
| 6.6.1.f Encourage private landowners to dedicate land to Federal, State, or County governments, or nonprofit land trusts, for parks and open-space protection consistent with the MIP. | | | ✓ |
| 6.6.1.g Strengthen inter-agency coordination including State and County departments, such as resolving joint use of facilities and properties. | | | ✓ |
| 6.6.1.h Work with the State to prepare and implement a master management plan for ʻĀhihi-Kīnaʻu and La Perouse-Keoneʻōʻio Bay to Kanaloa Point region. | | | ✓ |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **Objective:** | | | |
| 6.6.2 Achieve parks and recreation opportunities to meet the diverse needs of our community. | | ✓ | |
| **Policies:** | | | |
| 6.6.2.a Establish appropriate level-of-service standards at the neighborhood, community, and regional levels. | | | ✓ |
| 6.6.2.b Identify and acquire parks and recreational facilities that address existing park inadequacies and complement and enhance neighborhoods, communities, and natural land features. | | | ✓ |
| 6.6.2.c Design park facilities to preserve and enhance natural site characteristics, maximize views, protect environmental and cultural sites, and minimize water demands. | | | ✓ |
| 6.6.2.d Acquire lands along the shoreline, between coastal roadways and the ocean. | | | ✓ |
| 6.6.2.e Encourage the development of regional parks, district parks, and greenways in a manner that helps to contain sprawl, provide separation between distinct communities, or offer open space within urban communities. | | | ✓ |
| 6.6.2.f Require large master-planned communities that incorporate a mixture of park facilities pursuant to parks standards and functional plans. | | | ✓ |
| 6.6.2.g Support appropriate areas for cultural parks (e.g., Kepaniwai) in each community plan area. | | | ✓ |
| 6.6.2.h Incorporate community input to determine the appropriate location, design, and long-term stewardship of parks and recreation facilities. | | | ✓ |
| 6.6.2.i Manage commercial activities at public parks to minimize impacts to residents. | | | ✓ |
| 6.6.2.j Support public-private partnerships to implement the acquisition and development of parks when consistent with the General Plan. | | | ✓ |
| 6.6.2.k Support a coordinated program to improve, operate, and maintain joint-use facilities and grounds. | | ✓ | |
| **Objective:** | | | |
| 6.6.3 An expanded network of greenways, trails, pathways, and bikeways. | | | ✓ |
| **Policies:** | | | |
| 6.6.3.a Link existing and future park sites, natural areas, the shoreline, and residential areas with a network of bikeways, pedestrian paths, trails, and greenways. | | | ✓ |
| 6.6.3.b Support the implementation of plans and programs that facilitate pedestrian mobility and access to active and passive recreation areas and sites. | | | ✓ |
| 6.6.3.c Collaborate with the State and private land owners to ensure perpetual access and proper stewardship of traditional trails and access systems. | | | ✓ |
| 6.6.3.d Facilitate the development of well-managed noncommercial campgrounds throughout the island. | | | ✓ |
| 6.6.3.e Consider requiring commercial bike rental businesses to provide funding that supports a mauka-to-makai Haleakalā bikeway improvement program. | | | ✓ |
| 6.6.3.f Ensure ADA compliance and seek opportunities to make all parks and recreational facilities accessible to people with disabilities. | | | ✓ |

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|---|---|---|---|
| ***Analysis:*** **The proposed action seeks to improve Helene Hall, a community center located in the midst of the Hāna Bay Beach Park. Both facilities provide opportunity for complimentary services for Hāna residents.** | | | |
| **PUBLIC FACILITIES** | | | |
| **Goal:** | | | |
| 6.7 Maui will have adequate public facilities that meet the diverse needs of residents. | ✓ | | |
| **Objective:** | | | |
| 6.7.1 More effective planning for public facilities to meet community needs. | ✓ | | |
| **Policies:** | | | |
| 6.7.1.a Ensure the development and update of island-wide public facilities functional plans that incorporate prioritized facilities, programs, and a financial component. | | | ✓ |
| 6.7.1.b Establish appropriate level-of-service standards for public facilities provided by the County. | | | ✓ |
| 6.7.1.c Pursue improvements and upgrades of County public facilities consistent with the public facilities functional plan. | ✓ | | |
| 6.7.1.d Recognize Wailuku Town as Maui's Civic Center and support the revitalization of the Civic Center District by consolidating government office spaces, enhancing landscape beautification, and providing adequate public parking. | | | ✓ |
| 6.7.1.e Support, with community input, the relocation of the Maui Community Correctional Center from Wailuku to an appropriate location in Puʻunēnē. | | | ✓ |
| 6.7.1.f Adequately plan and fund public safety facilities (fire, police, ambulance, civil defense) to meet community needs. | | | ✓ |
| 6.7.1.g Increase joint facilities utilization and program coordination between State and County agencies such as baseyards, communication centers, recreational facilities, etc., where feasible. | | ✓ | |
| 6.7.1.h Focus future expenditures for additional government office space, parking, and related facilities in Wailuku's Civic Center District. | | | ✓ |
| 6.7.1.i Encourage continuous and safe walkways for children within one mile of each school. | | | ✓ |
| 6.7.1.j Encourage public-private partnerships to identify and resolve public facility plan shortcomings when consistent with the General Plan. | | | ✓ |
| 6.7.1.k Incorporate community/area residents' input to determine the appropriate location and design of public facilities. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater upgrades at the Helene Hall and is directly and indirectly applicable to the goal, objective, and policies related to adequate provision of public facilities to meet community needs. The proposed improvements will ensure the continued use of Helene Hall and the commercial kitchen to meet community needs. The proposed improvements will allow Helene Hall to be used for joint facility utilization by State and County agencies. Such utilization may include holding community meetings for State and County projects in East Maui.** | | | |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| **SCHOOLS AND LIBRARIES** | | | |
| **Goal:** | | | |
| 6.8 Maui will have school and library facilities that meet residents' needs and goals. | | | ✓ |
| **Objective:** | | | |
| 6.8.1 Assist in providing appropriate school and library facilities in a timely manner and in strategic locations. | | | ✓ |
| **Policies:** | | | |
| 6.8.1.a Work in partnership with all educational institutions to meet current and future needs including appropriate location, timing, and design of future facilities. | | | ✓ |
| 6.8.1.b Allow for the expansion and intensification of uses at the UHMC including satellite campuses operating in remote areas. | | | ✓ |
| 6.8.1.c Encourage the DOE to build and maintain smaller, community-oriented schools. | | | ✓ |
| 6.8.1.d Encourage better cooperation by the State and County for use of State and County facilities. | | | ✓ |
| 6.8.1.e Encourage the State to upgrade, modernize, and expand school facilities, including those in remote communities. | | | ✓ |
| 6.8.1.f Work with the State to develop a master plan for the expansion of UHMC in accordance with the MIP. | | | ✓ |
| 6.8.1.g Support partnerships (public/private/nonprofit) to build and staff new schools and improve existing facilities. | | | ✓ |
| 6.8.1.h Work with the BOE HSPLS to provide centralized library services (including telecommunications) to all areas of Maui. | | | ✓ |
| 6.8.1.i Work with the State to expedite planning and construction of Kīhei High School, including the integration of the high school with the Maui Research and Technology Park. | | | ✓ |
| 6.8.1.j Work with the State to identify intermediate school sites in Central Maui and other areas where needed. | | | ✓ |
| **Objective:** | | | |
| 6.8.2 Provide a more expansive network of safe and convenient pedestrian-friendly streets, trails, pathways, and bikeways between neighborhoods and schools where appropriate. | | | ✓ |
| **Policies:** | | | |
| 6.8.2.a Encourage the State to build new school facilities in appropriate locations that minimize time and distance for students to travel to and from school. | | | ✓ |
| 6.8.2.b Encourage the State to implement the Safe Routes to School initiative with funding commitments to help the County plan and fund projects that ensure safe access routes to school. | | | ✓ |
| ***Analysis:*** **The proposed project is not directly or indirectly applicable to the goal, objective, and policies related to schools and libraries.** | | | |

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|---|---|---|---|
| **HEALTH CARE** | | | |
| **Goal:** | | | |
| 6.9 All of Maui residents will have the best possible health care to include healthy living, disease prevention, as well as acute and long-term care. | | | ✓ |
| **Objective:** | | | |
| 6.9.1 Greater autonomy to the Maui region in their efforts to improve medical care on the island. | | | ✓ |
| **Policies:** | | | |
| 6.9.1.a Encourage the State to give greater autonomy to the Maui region in their efforts to improve medical care on the island. | | | ✓ |
| 6.9.1.b Support innovative financial solutions, such as capital partnerships, joint ventures, and consolidations for MMMC and other health institutions. | | | ✓ |
| 6.9.1.c Support MMMC as a major core medical center that provides a greater range of services. | | | ✓ |
| 6.9.1.d Support the immediate development of a critical access hospital in West Maui. | | | ✓ |
| 6.9.1.e Support the expansion of regional critical-access facilities, where allowed by Federal regulations. | | | ✓ |
| 6.9.1.f Improve medical service to remote and outlying regions. | | | ✓ |
| 6.9.1.g Support transportation services for dialysis patients and community dialysis programs. | | | ✓ |
| 6.9.1.h Work with the State to determine the feasibility of appropriate medical facilities in South Maui and Hāna, including the possible reestablishment of a small community hospital in Hāna, the establishment of a hospital in South Maui, and assist the State in securing funding to meet Maui's health care needs. | | | ✓ |
| **Objective:** | | | |
| 6.9.2 An expansion of long-term care facilities and long-term care alternatives to meet the needs of our aging population. | | | ✓ |
| **Policies:** | | | |
| 6.9.2.a Support efforts to increase Maui's long-term care bed capacity to cover current and future needs, close to large population centers. | | | ✓ |
| 6.9.2.b Recognize that facilities for low-income elders who need long-term care are a needed form of affordable and subsidized housing. | | | ✓ |
| 6.9.2.c Evaluate the needs of the long-term disabled and provide planning support for their care, if there is a need for long-term care facilities. | | | ✓ |
| 6.9.2.d Consider long-term care facilities as a major potential employment base and encourage the recruitment and training of potential employees. | | | ✓ |
| **Objective:** | | | |
| 6.9.3 More support to home-care and community-based programs so they become alternatives to traditional nursing homes. | | | ✓ |
| **Policies:** | | | |
| 6.9.3.a Support the establishment of a program to assist the elderly and people with disabilities to remain in their homes or in a home-like setting. | | | ✓ |

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|---|---|---|---|
| 6.9.3.b Support the establishment of senior and adult-day-care centers and senior housing. | | | ✓ |
| 6.9.3.c Continue to support existing senior centers (e.g. Kaunoa), and establish new senior centers that will provide day-care sites and programs for the disabled and elderly. | | | ✓ |
| 6.9.3.d Support funding alternatives for community-based services that assist home-care efforts. | | | ✓ |
| 6.9.3.e Encourage the State to adopt the recommendations contained within the Legislative Reference Bureau's report entitled "Gimme a Break: Respite Care Services in Other States," (December 2007) where appropriate, feasible, and consistent with the MIP. | | | ✓ |
| **Objective:** | | | |
| 6.9.4 Improved preventative medicine and primary health care. | | | ✓ |
| **Policies:** | | | |
| 6.9.4.a Develop and utilize health-status benchmarks to measure prevention and primary health care service delivery. | | | ✓ |
| 6.9.4.b Support programs that provide family planning assistance. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to health care.** | | | |
| **ENERGY** | | | |
| **Goal:** | | | |
| 6.10 Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation. | | | ✓ |
| **Objective:** | | | |
| 6.10.1 Reduce fossil fuel consumption. Using the 2005 electricity consumption as a baseline, reduce by 15 percent in 2015; 20 percent by 2020; and 30 percent by 2030. | | | ✓ |
| **Policies:** | | | |
| 6.10.1.a Support energy efficient systems, processes, and methods in public and private operations, buildings, and facilities. | | | ✓ |
| 6.10.1.b Support the Maui Solar Rooftop initiative. | | | ✓ |
| 6.10.1.c Support Hawai`i Energy and other Public Utility Commission (PUC) approved energy efficiency programs. | | | ✓ |
| **Objective:** | | | |
| 6.10.2 Increase the minimum percentage of electricity obtained from clean, renewable energy sources. By 2015, more than 15 percent of Maui's electricity will be produced from locally-produced, clean, renewable energy sources, 25 percent by 2020, and 40 percent by 2030. | | | ✓ |
| **Policies:** | | | |
| 6.10.2.a Evaluate available renewable energy resource sites and applicable technologies. | | | ✓ |

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|---|---|---|---|
| 6.10.2.b Encourage the installation of renewable energy systems, where appropriate. | | | ✓ |
| 6.10.2.c Support the establishment of new renewable energy facilities at appropriate locations provided that environmental, view plane, and cultural impacts are addressed. | | | ✓ |
| 6.10.2.d Encourage all new County facilities completed after January 1, 2015, to produce at least 15 percent of their projected electricity needs with onsite renewable energy. | | | ✓ |
| **Objective:** | | | |
| 6.10.3 Increased use of clean, renewable energy. | | | ✓ |
| **Policies:** | | | |
| 6.10.3.a Support efforts in the PUC to upgrade Maui's power grid to integrate renewable energy from multiple sources and wheeling of electricity. | | | ✓ |
| 6.10.3.b Encourage the PUC to work with the County to implement and expedite community supported renewable energy projects. | | | ✓ |
| 6.10.3.c Encourage efforts to produce more renewable energy using distributed generation. | | | ✓ |
| 6.10.3.d Encourage import substitution by MECO and the broader community to become more self-sufficient in energy production. | | | ✓ |
| 6.10.3.e Educate the public on the economic and environmental benefits from the increased use of renewable energy. | | | ✓ |
| 6.10.3.f Encourage support from the Federal government, State, and the private sector for Maui's renewable energy objectives. | | | ✓ |
| 6.10.3.g Encourage incentives to support the development and use of renewable energy. | | | ✓ |
| **Objective:** | | | |
| 6.10.4 More efficient distribution of power throughout the island while preserving island beauty. | | | ✓ |
| ***Analysis:*** **The proposed action is not applicable to the goal of advancing Maui's energy needs through local sources of clean, renewable energy, and through conservation.** | | | |
| **HARBORS AND AIRPORT** | | | |
| **Goal:** | | | |
| 6.11 Maui will have harbors and airports that will efficiently, dependably, and safely facilitate the movement of passengers and cargo. | | | ✓ |
| **Objective:** | | | |
| 6.11.1 Upgraded harbor facilities to handle larger volumes of freight and passengers and additional small boat harbors. | | | ✓ |
| **Policies:** | | | |
| 6.11.1.a Support the expansion and upgrade of Kahului Harbor through the following, provided that any expansion is respectful of cultural practices and existing recreational uses and supports improved water quality: | | | ✓ |
| (1) Accommodate increasing volumes of cargo; | | | ✓ |

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|---|---|---|---|
| (2) Provide deeper pier depths and greater fuel-receiving and storing capacities; and | | | ✓ |
| (3) Ensure safe and efficient work areas, including separating passenger operations from fuel and cargo operations. | | | ✓ |
| 6.11.1.b Work with public and private entities to provide adequate pier slips, utilities, repair facilities, and waste-disposal capabilities. | | | ✓ |
| 6.11.1.c Encourage the State to safely separate passenger (cruise and ferry) operations from hazardous bulk fuels and heavy cargo transporting operations, while not decreasing harbor's capacity to safely support various recreational uses. | | | ✓ |
| 6.11.1.d Encourage the State to develop cargo inspecting sites and facilities for efficient cargo and container processing and transportation and to prevent alien species entry. | | | ✓ |
| 6.11.1.e Support a State and County task force to study the feasibility of a second commercial harbor on Maui. | | | ✓ |
| **Objective:** | | | |
| 6.11.2 Establish more economically thriving and environmentally sensitive small boat harbors accommodating resident and business activity, including fishing, recreation, and tour boats. | | | ✓ |
| **Policy:** | | | |
| 6.11.2.a Provide for needed shore-side facilities and capabilities to support small boat harbor users (e.g. repair facilities, parking, cold storage, and mass-transit connections). | | | ✓ |
| **Objective:** | | | |
| 6.11.3 Upgraded airport facilities and navigation aids to serve the needs of passengers, freight movements, and general aviation. | | | ✓ |
| **Policies:** | | | |
| 6.11.3.a Protect the island's airports from encroaching urbanization that may negatively impact the airport operations. | | | ✓ |
| 6.11.3.b Support State efforts to improve Kahului Airport operations to better serve passenger and cargo needs. | | | ✓ |
| 6.11.3.c Support State efforts to identify sites and plan to relocate and accommodate small and rotary wing aircraft. | | | ✓ |
| 6.11.3.d Encourage the State to improve airport safety including lighting, fuel transmission, fuel safety, etc. | | | ✓ |
| 6.11.3.e Consider expansion of rental car facilities in West and South Maui. | | | ✓ |
| 6.11.3.f Consider expansion of mass transit (bus, fixed-rail, shuttle, and taxis, bicycle, and pedestrian facilities) to and from Kahului Airport and not limited to passenger movements (allowing for luggage and cargo). | | | ✓ |
| 6.11.3.g Encourage the State to maintain airport capacity and to encourage more responsive air services to Hāna and Kapalua. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to harbors and airports.** | | | |

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|---|---|---|---|
| **CHAPTER 7 – LAND USE** | | | |
| **AGRICULTURAL LANDS** | | | |
| **Goal:** | | | |
| 7.1 Maui will have a prosperous agricultural industry and will protect agricultural lands. | | | ✓ |
| **Objective:** | | | |
| 7.1.1 Significantly reduce the loss of productive agricultural lands. | | | ✓ |
| **Policies:** | | | |
| 7.1.1.a Allow, where appropriate, the clustering of development on agricultural lands when approved as a CSD plan or similar approval mechanism. | | | ✓ |
| 7.1.1.b Require, where appropriate, the review and approval of CSD plans prior to the subdivision of agricultural land. | | | ✓ |
| 7.1.1.c Discourage developing or subdividing productive agricultural lands for residential uses in which the residence would be the primary use and any agricultural activities would be secondary uses. | | | ✓ |
| 7.1.1.d Consider requirements for public notification and review of the subdivision of agricultural land into four or more lots. | | | ✓ |
| 7.1.1.e Focus urban growth, to the extent practicable, away from productive and important agricultural lands. | | | ✓ |
| 7.1.1.f Strongly discourage the conversion of productive and important agricultural lands (such as sugar, pineapple, and other produce lands) to rural or urban use, unless justified during the General Plan update, or when other overriding factors are present. | | | ✓ |
| 7.1.1.g Further develop the requirements for agricultural assessments found under Section 19.510, MCC. | | | ✓ |
| 7.1.1.h Provide incentives for landowners to preserve and protect agricultural lands from development through the use of TDR/PDR, tax credits, easement programs, or similar means. | | | ✓ |
| 7.1.1.i Promote the use of U.S.D.A. Farm and Ranch Lands Protection Program grants to fund the acquisition of conservation easements on eligible agricultural lands. | | | ✓ |
| 7.1.1.j Require all major developments adjacent to agricultural lands to provide an appropriate and site-specific agricultural protection buffer as part of a required site plan. | | | ✓ |
| 7.1.1.k Support and promote the viability of Maui's agricultural businesses through property tax incentives and other programs and subsidies. | | | ✓ |
| 7.1.1.l Encourage future community plan efforts to identify lands within the County Agricultural zoning district that are primarily being used for large-lot residential or rural use and consider such lands for reclassification to an appropriate County Rural zone. | | | ✓ |
| **Objective:** | | | |
| 7.1.2 Reduction of the island's dependence on off-island agricultural products and expansion of export capacity. | | | ✓ |

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|---|---|---|---|
| **Policies:** | | | |
| 7.1.2.a Coordinate with the agricultural community, associations/community groups, agricultural landowners, and the State to designate IALs. | | | ✓ |
| 7.1.2.b Support an incentive package for productive Agricultural Lands which aims to ensure agricultural viability for small- and commercial-scale agricultural producers. | | | ✓ |
| 7.1.2.c Actively look to acquire land and provide infrastructure to expand the agricultural park and establish new agricultural parks. | | | ✓ |
| 7.1.2.d Support the designation of a research and development area within agricultural parks to help farmers stay attuned to new technology and research. | | | ✓ |
| 7.1.2.e Support local cooperative extension services to facilitate timely technology transfer opportunities. | | | ✓ |
| 7.1.2.f Support plans and programs to develop additional sources of water for irrigation purposes. | | | ✓ |
| 7.1.2.g Consider appropriate subdivision requirements (gravel roads, above-ground utilities, etc.) in those subdivisions creating Agricultural Parks where lots are limited to agricultural production with no dwellings. | | | ✓ |
| 7.1.2.h Support the recommendations, policies, and actions contained within the Maui Agricultural Development Plan, July 2009, when consistent with the MIP. | | | ✓ |
| 7.1.2.i Allow water and tax discounts for legitimate farming operations on rural and agricultural land. | | | ✓ |
| 7.1.2.j Give priority in delivery and use of agricultural water and agricultural land within County agricultural parks to cultivation of food crops for local consumption. | | | ✓ |
| 7.1.2.k Support programs that control pests and diseases that affect agriculture. | | | ✓ |
| 7.1.2.l Support the development of training and apprenticeship programs to encourage an adequate supply of agricultural workers. | | | ✓ |
| **Objective:** | | | |
| 7.1.3 Support and facilitate connectivity between communities. | | | ✓ |
| **Policies:** | | | |
| 7.1.3.a Evaluate the impact of gated communities on interconnectivity. | | | ✓ |
| 7.1.3.b Discourage land use and urban design that impedes interconnectivity between adjacent communities. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to agricultural land use.** | | | |
| **RURAL AREAS** | | | |
| **Goal:** | | | |
| 7.2 Maui will have a rural landscape and lifestyle where natural systems, cultural resources and farm lands are protected and development enhances and compliments the viability and character of rural communities. | | ✓ | |
| **Objective:** | | | |
| 7.2.1 Reduce the proliferation and impact of residential development outside of urban, small town, and rural growth boundaries. | | | ✓ |

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|---|---|---|---|
| **Policies:** | | | |
| 7.2.1.a Focus development to areas inside urban, small town, and rural growth boundaries to preserve natural, cultural, and agricultural resources. | | | ✓ |
| 7.2.1.b Encourage cluster development with a mandatory buffer requirement/clear edge at the interface of country towns, agricultural uses, and surrounding rural landscapes. | | | ✓ |
| 7.2.1.c Encourage or require, where appropriate, CSDs and the use of green spaces/natural separations to protect the character of rural landscapes. | | | ✓ |
| 7.2.1.d Encourage basic goods/services in business country towns. | | | ✓ |
| 7.2.1.e Allow for mixed uses, including residential uses, within Business Country Town Districts. | | | ✓ |
| 7.2.1.f Encourage the use of alternative stormwater management techniques that minimize land disturbance and preserve natural drainage features. | | | ✓ |
| 7.2.1.g Encourage green belts, open space buffers, and riparian zones to minimize conflicts between agriculture and residential uses. | | | ✓ |
| 7.2.1.h Evaluate the impact of gated communities on inter-connectivity. | | | ✓ |
| **Objective:** | | | |
| 7.2.2 More appropriate service/infrastructure standards to enhance and protect the island's rural character and natural systems. | | ✓ | |
| **Policies:** | | | |
| 7.2.2.a Minimize impermeable surfaces within rural areas. | | | ✓ |
| 7.2.2.b Protect and support the character, economic viability, and historic integrity of Maui's small towns. | | ✓ | |
| 7.2.2.c Use infrastructure, public service, and design standards that are appropriate to rural areas. | | ✓ | |
| 7.2.2.d Discourage land use and urban design that impede interconnectivity between adjacent communities. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is indirectly applicable to the goal, objective, and policies related to rural areas. The proposed design solution for Helene Hall's wastewater system is considered appropriate for the rural environs in which it will be located.** | | | |
| **URBAN AREAS** | | | |
| **Goal:** | | | |
| 7.3 Maui will have livable human-scale urban communities, an efficient and sustainable land use pattern, and sufficient housing and services for Maui residents. | | | ✓ |
| **Objective:** | | | |
| 7.3.1 Facilitate and support a more compact, efficient, human-scale urban development pattern. | | | ✓ |
| **Policies:** | | | |
| 7. 3.1.a Ensure higher-density compact urban communities, infill, and redevelopment of underutilized urban lots within Urban Growth Boundaries. | | | ✓ |

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|---|---|---|---|
| 7.3.1.b Maintain a distinct separation between communities, such as but not limited to, Wailuku and Waikapū; Wailuku and Waiheʻe; Pukalani and Makawao; Pukalani and Kula; Makawao and Hāliʻimaile; Lahaina and Kāʻanapali; Kīhei and Māʻalaea; and Māʻalaea and Waikapū, to protect the character and identity of Maui's communities. | | | ✓ |
| 7.3.1.c Strengthen evaluation requirements for new urban expansion, new towns, and major urban infill projects within urban growth areas. Tailor submittal requirements to reflect the impact or scale of different projects. | | | ✓ |
| 7.3.1.d Ensure future amendments to urban growth boundaries achieve the following: (1) provide a beneficial extension of the existing community; (2) are in areas where it is cost-effective to provide and operate infrastructure/public service facilities; and (3) do not promote automobile-oriented land use patterns. | | | ✓ |
| 7.3.1.e Evaluate the impact of gated communities on inter-connectivity. | | | ✓ |
| 7.3.1.f Encourage the development and implementation of neighborhood design standards that are environmentally friendly, such as LEED for Neighborhood Development (LEED – ND) standards. | | | ✓ |
| 7.3.1.g Discourage future pyramid zoning within the industrial zoning districts, while allowing accessory commercial uses and grandfathering existing uses. | | | ✓ |
| 7.3.1.h Promote agriculture by encouraging community gardening, community-supported agricultural programs, and farmers markets within and adjacent to urban areas. | | | ✓ |
| 7.3.1.i Discourage land use and urban design that impedes inter-connectivity between adjacent communities. | | | ✓ |
| **Objective:** | | | |
| 7.3.2 Facilitate more self-sufficient and sustainable communities. | | | ✓ |
| **Policies:** | | | |
| 7.3.2.a When developing new communities, provide sufficient lands for commercial, appropriate industrial, educational, spiritual, and non-profit uses to serve the daily needs of community residents. | | | ✓ |
| 7.3.2.b Site community facilities such as schools, parks, libraries, and community centers within walking and biking distance of residences. | | | ✓ |
| 7.3.2.c Facilitate self-sufficient communities and shorten commutes by: | | | ✓ |
| (1) Directing residential development to job-rich areas; | | | ✓ |
| (2) Allowing for appropriate commercial development and community services to shorten commutes; and | | | ✓ |
| (3) Allowing home occupations or home-based businesses that are compatible with surrounding neighborhoods and lifestyles. | | | ✓ |
| 7.3.2.d Ensure, where appropriate, that affordable employee housing and multi-modal transportation opportunities are located near major employment centers. | | | ✓ |
| 7.3.2.e Discourage the establishment of bedroom communities where long commutes are required to employment centers. | | | ✓ |
| 7.3.2.f Facilitate the development of housing by focusing projects in locations where land and infrastructure costs facilitate the development of affordably-priced housing. | | | ✓ |

| Maui Island Plan Goals, Objectives and Policies<br>Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable | DA | IA | NA |
|---|---|---|---|
| 7.3.2.g Provide incentives to facilitate the development of multifamily housing. | | | ✓ |
| 7.3.2.h Encourage the placement of rental housing projects in the same areas as for-sale housing to facilitate mixed-income communities. | | | ✓ |
| 7.3.2.i Develop communities that provide sufficient parks, schools, libraries, and other essential public facilities and services to serve resident needs. | | | ✓ |
| 7.3.2.j Promote agriculture by encouraging community gardening, edible landscaping, community-supported agricultural programs, and farmers markets within and adjacent to urban areas. | | | ✓ |
| **Objective:** | | | |
| 7.3.3 Strengthen the island's sense of place. | | | ✓ |
| **Policies:** | | | |
| 7.3.3.a Protect and enhance the unique architectural and landscape characteristics of each community. | | | ✓ |
| 7.3.3.b Encourage Hawaiian architecture and tropical building designs. | | | ✓ |
| 7.3.3.c Support the continued revitalization of historic country towns, Wailuku Town, and Kahului's commercial core and harbor-front without displacing traditional, cultural, recreational and customary uses. | | | ✓ |
| 7.3.3.d Strongly encourage the preservation of buildings, structures, and sites of historic significance. | | | ✓ |
| 7.3.3.e Require community input through Design Workshops for major new urban expansion, new towns, and major urban infill projects. | | | ✓ |
| 7.3.3.f Require design enhancement, landscaping, and integration of park and rides, bicycle parking areas, and mass-transit infrastructure to mitigate the effect of parking lots and structured parking on the urban landscape. | | | ✓ |
| 7.3.3.g Ensure that safe and attractive public spaces (e.g., plazas, parks, town/village squares) are provided throughout the island's urban areas. | | | ✓ |
| **Objective:** | | | |
| 7.3.4 Strengthen planning and management for the visitor industry to protect resident quality of life and enhance the visitor experience. | | | ✓ |
| **Policies:** | | | |
| 7.3.4.a Discourage the conversion of hotel units to timeshares and fractional ownership. | | | ✓ |
| 7.3.4.b Monitor and manage the amount of, and impacts from, timeshares and fractional ownership. | | | ✓ |
| 7.3.4.c Manage short-term rentals and bed-and-breakfast homes through a permitting and regulatory process in accordance with adopted ordinances and community plan policies. | | | ✓ |
| 7.3.4.d Limit large-scale resort development to the four existing resort destination areas of Wailea, Mākena, Kapalua and Kāʻanapali. "Large Scale Resort" is defined as complexes that include multiple accommodation facilities, activity businesses, retail complexes, and other amenities. | | | ✓ |

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|---|---|---|---|
| **Objective:** | | | |
| 7.3.5 Ensure that Maui's planning and development review process becomes more transparent, efficient, and innovative. | | | ✓ |
| **Policies:** | | | |
| 7.3.5.a Encourage greater community involvement in land use planning and decision making. | | | ✓ |
| 7.3.5.b Establish a predictable and timely development review process that facilitates the approval of projects that meet planning and regulatory requirements. | | | ✓ |
| 7.3.5.c Increase inter-agency coordination between the Department of Planning and all State and County agencies responsible for infrastructure and public facilities provision, particularly as it relates to the mitigation of long-term cumulative impacts resulting from development projects. | | | ✓ |
| 7.3.5.d Provide greater certainty and transparency in the development review process. | | | ✓ |
| 7.3.5.e Expand and maintain land use and geographic information system databases for improved decisions, and make data and products available to the public. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall located within the Hāna Small Town Boundary and is not applicable to the goal, objective, and policies related to urban areas.** | | | |
| **CHAPTER 8 – DIRECTED GROWTH PLAN** | | | |
| **URBAN AND SMALL TOWN GROWTH AREA** | | | |
| **Goal:** | | | |
| 8.1 Maui will have well-serviced, complete, and vibrant urban communities and traditional small towns through sound planning and clearly defined development expectations. | | ✓ | |
| **Policies:** | | | |
| 8.1.a The County, with public input, will be responsible for designating new growth areas where infrastructure and public facilities will be provided, consistent with the policies of the MIP and in accordance with State and County infrastructure plans. | | | ✓ |
| 8.1.b Amendments to a UGB or STB shall be reviewed as a MIP amendment. A UGB or STB shall only be expanded if the island-wide inventory (maintained by the Department of Planning) of existing land uses (residential, commercial, industrial) indicates that additional urban density land is necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP. | | | ✓ |
| 8.1.c Community plans shall provide for urban density land use designations only within UGBs and Small Towns. The County may only support and approve State Urban Land Use Designations for areas within UGBs, STBs, and Rural Villages. | | | ✓ |
| 8.1.d The unique character and function of existing small towns shall be protected to retain and preserve their sense of place. | | ✓ | |
| 8.1.e New development shall be consistent with the UGBs, STBs, and all other applicable policies of the MIP. New urban-density development shall not be allowed outside of a UGB or STB. | | | ✓ |

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|---|---|---|---|---|
| 8.1.f | The County, as a condition of development approval, shall require developers of privately owned infrastructure systems to provide financial insurance (bonding, etc.) for the operation and maintenance of these systems. | | | ✓ |
| 8.1.g | The County shall implement a zoning program to comprehensively redistrict and rezone lands within UGBs according to updated community plan policies and map designations. | | | ✓ |
| 8.1.h | The County will seek to focus capital improvements (schools, libraries, roads, and other infrastructure and public facilities) within the UGBs and STBs in accordance with the MIP. | | ✓ | |
| 8.1.i | The County will promote (through incentives, financial participation, expedited project review, infrastructure/public facilities support, etc.) appropriate urban infill, redevelopment and the efficient use of buildable land within UGBs to avoid the need to expand the UGBs. | | | ✓ |
| 8.1.j | The MIP's UGBs and STBs shall not be construed or implemented to prohibit the construction of a single-family dwelling on any existing parcel where otherwise permitted by law. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater system upgrades at the Helene Hall and is indirectly applicable to the goal, objective, and policies related to directed growth of small towns. The proposed improvements will be located within the Hāna Small Town Boundary and is consistent with the MIP. The proposed upgrades to Helen Hall's wastewater system will ensure the facility will be available for use by current and future generations and help maintain Hāna's character and a sense of place for Hāna residents.** | | | | |
| **RURAL GROWTH AREA** | | | | |
| **Goal:** | | | | |
| 8.2 | Maui will maintain opportunities for agriculture and rural communities through sound planning and clearly defined development expectations. | | | ✓ |
| **Policies:** | | | | |
| 8.2.a | Amendments to a RGB shall be reviewed as an MIP amendment. A RGB shall only be expanded if an island-wide inventory of existing land uses (residential, commercial, industrial) indicates that additional lands are necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP. | | | ✓ |
| 8.2.b | New development shall be consistent with RGB and all other applicable policies and requirements of the MIP. Public, quasi-public, civic, and limited commercial or industrial uses may be allowed in the RGB when the proposed uses demonstrate a public need and are consistent with the Community Plan and zoning. | | | ✓ |
| 8.2.c | Environmental protection and compatibility will be a top priority in rural growth areas. | | | ✓ |
| 8.2.d | All development within rural growth areas should avoid encroachment upon prime agricultural land. | | | ✓ |
| 8.2.e | Rural growth areas include Rural Residential Areas and Rural Villages. Rural residential areas may be designated when they are located in association with or on the border of urban growth areas or Small Towns; and/or when they provide for complete, self-sufficient rural communities with a range of uses to be developed at densities that do not require urban infrastructure. | | | ✓ |

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|---|---|---|---|---|
| 8.2.f | Community plans shall provide for rural density land use designations only within RGBs; provided that limited community plan urban designations may be allowed within Rural Villages. New rural growth areas shall not be located where urban expansion may ultimately become necessary or desirable. New rural-density development shall not be allowed outside of a RGB. | | | ✓ |
| 8.2.g | New rural growth areas intended to be complete, self-sufficient rural communities must be located a significant distance from existing urban areas, distinctly separated by agricultural or open lands. | | | ✓ |
| 8.2.h | Urban-scale infrastructure and public facilities shall not be provided in rural areas except as described in the defined Level-of-Service (LOS) standards. There should be no expectations of urban services in rural areas. | | | ✓ |
| 8.2.i | Urban development standards shall not be required within RGBs except in fulfillment of Federal law. | | | ✓ |
| 8.2.j | The unique character and function of existing small towns and rural communities shall be protected to retain and preserve their sense of place. | | | ✓ |
| 8.2.k | Preserve rural landscapes in which natural systems, cultural resources, and agricultural lands are protected and development compliments rural character and contributes to the viability of communities and small towns. | | | ✓ |
| 8.2.l | The MIP's RGBs shall not be construed or implemented to prohibit the construction of a single family dwelling on any existing parcel where otherwise permitted by law. | | | ✓ |
| 8.2.m | The County shall implement a zoning program to comprehensively redistrict and rezone lands within RGBs, and to implement community plan policies and map designations. | | | ✓ |
| 8.2.n | At the time of zoning from agricultural to rural, Council will consider prohibiting restrictions on agricultural activity. | | | ✓ |
| ***Analysis:*** **The proposed project falls within the MIP's Small Town Boundary and is not directly or indirectly applicable to the goal, objective, and policies related to rural growth areas.** | | | | |
| **PROTECTED AREA POLICY** | | | | |
| 8.3.a | The Protected Areas in Diagrams E-1, NW-1, N-1, NE-1, S-1, SE-1, and WC-1 should be concurrently reviewed with Table 8-2 and with any proposed land uses that may result in an adverse impact on a Protected Area. The County Council and the Administration should be notified if a Protected Area may be compromised by a development proposal. | | | ✓ |
| ***Analysis:*** **The proposed project involves wastewater treatment and disposal system upgrades at the Helene Hall and is not applicable to the goal, objective, and policies related to Protected Area policy. The project area is not located within any of the MIP's Protected Areas.** | | | | |

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