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HWY-K 4.250342

November 18, 2025

**VIA ELECTRONIC:** <https://planning.hawaii.gov/erp/submittal-form/>

TO: JAMES KUNANE TOKIOKA, DIRECTOR  
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THROUGH: MARY ALICE EVANS, DIRECTOR  
ENVIRONMENTAL REVIEW PROGRAM  
OFFICE OF PLANNING AND SUSTAINABLE DEVELOPMENT

FROM: EDWIN H. SNIFFEN   
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) AND ANTICIPATED  
FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR  
KUHIO HIGHWAY SHOULDER IMPROVEMENTS  
ROUTE 560 IN THE VICINITY OF HANALEI BRIDGE  
DISTRICT OF HANALEI, COUNTY OF KAUAI, STATE OF HAWAII  
TAX MAP KEYS (4) 5-4-004:999 AND (4) 5-4-004:030

The Hawaii Department of Transportation has reviewed the enclosed DEA and FONSI determination for the proposed Kuhio Highway Shoulder Improvements and Property Exchange, Route 560 near the Hanalei Bridge project on the island of Kauai for publication in the next available edition of *The Environmental Notice*.

In accordance with the requirements for Hawaii Revised Statutes (HRS) Chapter 343, we are providing this DEA electronically via the "*Submittal Form for HRS Chapter 343 Publications in the Periodic Bulletin*". This submittal includes a **searchable PDF file** of the DEA and a **.zip file** containing a shapefile of the project area boundary.

If you have any questions, please contact Eric Fujikawa, Highways Kauai District Engineer at (808) 241-3006 or by email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

Attachment

**From:** [dbedt.opsd.erp@hawaii.gov](mailto:dbedt.opsd.erp@hawaii.gov)  
**To:** [DBEDT OPSD Environmental Review Program](#)  
**Subject:** New online submission for The Environmental Notice  
**Date:** Friday, December 12, 2025 2:54:31 PM

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**Action Name**

Kuhio Highway Shoulder Improvements and Property Exchange, Route 560 in the Vicinity of Hanalei Bridge

**Type of Document/Determination**

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

**HRS §343-5(a) Trigger(s)**

- (1) Propose the use of state or county lands or the use of state or county funds
- (2) Propose any use within any land classified as a conservation district

**Judicial district**

Hanalei, Kaua'i

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

(4) 5-4-004:030, (4) 5-4-004:031, (4) 5-4-004:999, (4) 5-4-003:007, (4) 5-3-001:007

**Action type**

Agency

**Other required permits and approvals**

Clean Water Act (CWA) Section 404 Permit, Rivers and Harbors Act, Section 10 Permit, National Pollutant Discharge Elimination System (NPDES) Permit for Dewatering, CWA Section 401 Water Quality Certification, Community Noise Permit or Variances, Stream Channel Alteration Permit (SCAP), Land Acquisition Approval from the Board of Land and Natural Resources, Coastal Zone Management (CMZ) Section 307, HRS Chapter 6E, HRS Chapter 195D, DOT-Highways Permit for oversized/overweight transport on State of Hawai'i highways, Special Management Area (SMA) – Major, Grading Permit, Conservation District Use Permit (CDUP), if applicable.

**Proposing/determining agency**

State of Hawaii Department of Transportation

**Agency jurisdiction**

County of Kaua'i

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**Is there a consultant for this action?**

Yes

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[Map It](#)

**Action summary**

The Hawaii Department of Transportation–Highways, proposes to structurally stabilize the Hanalei River south bank to structurally support the Kuhio Highway pavement, shoulder, and appurtenances. The project is located along the Hanalei River in Hanalei Valley on Kaua'i. The project construction site (0.69 acres) is located near mile 1.7 (between milepost 1 and 2), approximately 0.4 miles west of the Hanalei Bridge. The Proposed Action addresses the present and future threats to the stability and integrity of the highway and provides a safe travel way between Hanalei and Princeville. It will realign the roadway and reconstruct the appurtenances. The Proposed Alternative is to construct a structurally stabilized wall with a vegetated earth reinforced stream bank (300 feet in length) using a "native plant vegetative mat" with a pile cap to address progressive erosion along the northern side of the highway. It will include Best Management Practices, erosion and sediment control measures. The Proposed Action will exchange property impacted by the improvements from HNWR, at a ratio of 2.2 to 1. The proposed property exchange with HNWR involve acquiring 3.62 acres of U.S. properties, currently managed by the USFWS. In return, HDOT will transfer 8.05 acres of State of Hawai'i owned properties to the U.S. Properties acquired by HDOT will be in TMK (4) 5-4-004:030, (4) 5-4-004:031, (4)-5-3-001:007 and (4) 5-4-003:007. The State of Hawai'i will transfer land from TMK (4) 5-4-004:999.

**Reasons supporting determination**

See Chapter 4.0: Anticipated Determination, Findings, and Reasons Supporting Determination of the Draft EA.

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

- [HWY-K-4.250342\\_Kuhio-Hwy-Imp.pdf](#)
- [Final-Draft-EA-HRS-343-Kuhio-Hwy-Shldr-Imp-20251.pdf](#)

**ADA Compliance certification (HRS §368-1.5):**

The authorized individual listed below acknowledges that they retain the responsibility for ADA compliance and are knowingly submitting documents that are unlocked, searchable, and may not be in an ADA compliant format for publication. Audio files do not include transcripts, captions, or alternative descriptions. The project files will be published without further ADA compliance changes from ERP, with the following statement included below the project summary in The Environmental Notice: "If you are experiencing any ADA compliance issues with the above project, please contact (authorized individual submitting the project at email)."

**Action location map**

- [Project-Boundary1.zip](#)

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**Authorization**

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



# Draft Environmental Assessment Kuhio Highway Shoulder Improvements and Property Exchange

## Route 560 in the Vicinity of Hanalei Bridge

Hanalei Ahupua‘a, Halele‘a District, Island of Kaua‘i, State of Hawai‘i

Tax Map Key: (4) 5-4-004:030, 031 and 999,

(4) 5-4-003:007, and (4) 5-3-001:007



Proposing Agency: State of Hawai‘i, Department of Transportation  
December 2025

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**Draft Environmental Assessment  
Kuhio Highway Shoulder Improvements  
and Property Exchange  
Route 560 in the Vicinity of Hanalei Bridge**

Location: Hanalei Ahupua‘a, Halele‘a District, Island of Kaua‘i,  
State of Hawai‘i  
Tax Map Key: (4) 5-4-004:030, 031 and 999, (4) 5-4-003:007  
and (4) 5-3-001:007

Proposing Agency: Hawai‘i Department of Transportation  
Highways Division

Prepared by: EKNA Services, Inc.

December 2025

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## CHAPTER 1 INTRODUCTION

The Hawai‘i Department of Transportation (HDOT), Highways Division (HWY) has determined that a Hawai‘i Revised Statute, Chapter 343 (HRS 343) Environmental Assessment is required for improvements to Kuhio Highway’s shoulder, travel way, appurtenances, property exchange (transfer), and Hanalei Riverbank stabilization in Hanalei Valley. The Proposed Action does not involve Federal funding. This Environmental Assessment is prepared in accordance with the HRS 343 and the rules and regulations established by the Department of Health, Hawai‘i Administrative Rules, Title 11, Chapter 200.1 (HAR 11-200.1).

The purpose of this Environmental Assessment (EA) is to disclose the environmental, economic, and technical consequences of the Proposed Action. Typically, for those actions which do not have a significant impact, a Finding of No Significant Impact (FONSI) can be issued. For those actions that will have a significant impact on the environment, an Environmental Impact Statement (EIS) must be completed. Table 1 provides a summary of the essential project information.

**TABLE 1  
PROJECT SUMMARY**

Type of Document:	Draft Environmental Assessment
Project Name:	Kuhio Highway Shoulder Improvements and Property Exchange, Route 560 Near Hanalei Bridge
HRS Chapter 343 Triggers:	Use of State funds and State lands
Proposing Agency:	State of Hawai‘i Department of Transportation
Contact:	Eric Fujikawa, PE, PLS Hawai‘i Department of Transportation Highways Division, Kaua‘i District 1720 Haleukana Street Lihue, Hawai‘i 96766  Phone: (808) 241-3015 Fax: (808) 241-3011 Mobile: (808) 278-8423 Email: <a href="mailto:eric.i.fujikawa@hawaii.gov">eric.i.fujikawa@hawaii.gov</a>

**TABLE 1(continued)**  
**PROJECT SUMMARY**

Location:	Hanalei Ahupua‘a, Halele‘a District Island of Kaua‘i State of Hawai‘i
Tax Map Key:	(4) 5-4-004:030, 031 and 999, (4) 5-4-003:007 and (4) 5-3-001:007
Land Area:	0.76 acres (approximately 33,000 square feet) Main project area – 0.69 acres Staging area – 0.07 acres Property transfer – 11.67 acres
Landowner:	State of Hawai‘i and United States of America (USA)
State Land Use Designation:	Agriculture / Conservation / Urban
County Zoning:	Agricultural / Open Space / Conservation
Determination	Anticipated Finding of No Significant Impact (AFONSI)

### 1.1 Description of Proposed Action

Scouring of the Hanalei Riverbank has undermined the highway’s subgrade, base course, and asphalt along a 300-foot stretch of Kuhio Highway near mile 1.7 (between milepost 1 and 2). The area is approximately 0.4 miles west of Hanalei Bridge, heading toward Hanalei Town (Figure 1). The Proposed Action will be constructed in Tax Map Keys (TMK) (4) 5-4-004:030 (U.S. Fish and Wildlife Service [USFWS]-owned land), and 999 (State of Hawai‘i-owned land) as shown in Figure 2. The Proposed Action is within the HDOT-HWY right-of-way and on the land used for the Hanalei National Wildlife Refuge (HNWR). The construction staging area will be on developed property in TMK (4) 5-3-001:007 which is currently used as a driveway and for various projects within the area.

The Proposed Action (Proposed Project) addresses the present and future threats to the stability and integrity of the highway and to provide a safe travel way between Hanalei and Princeville. In 2022, a temporary road realignment was constructed as an emergency measure following the extensive damage caused by the March 2021 flood event.

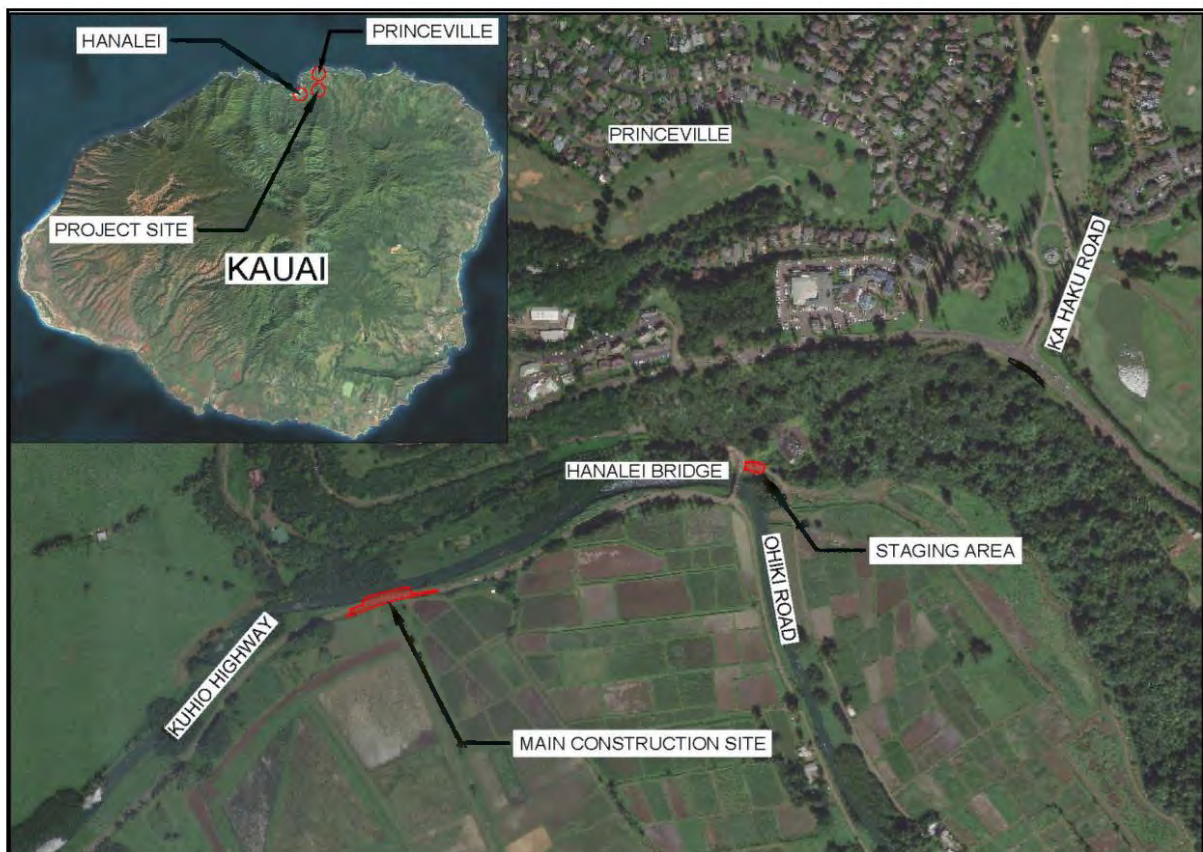
The Proposed Action demolishes the existing roadway and appurtenances that are affected by the scoured riverbank, realigns the roadway, and structurally stabilizes the riverbank. The riverbank will be reconstructed to prevent further scouring of the riverbank and to structurally support Kuhio Highway and associated infrastructure.



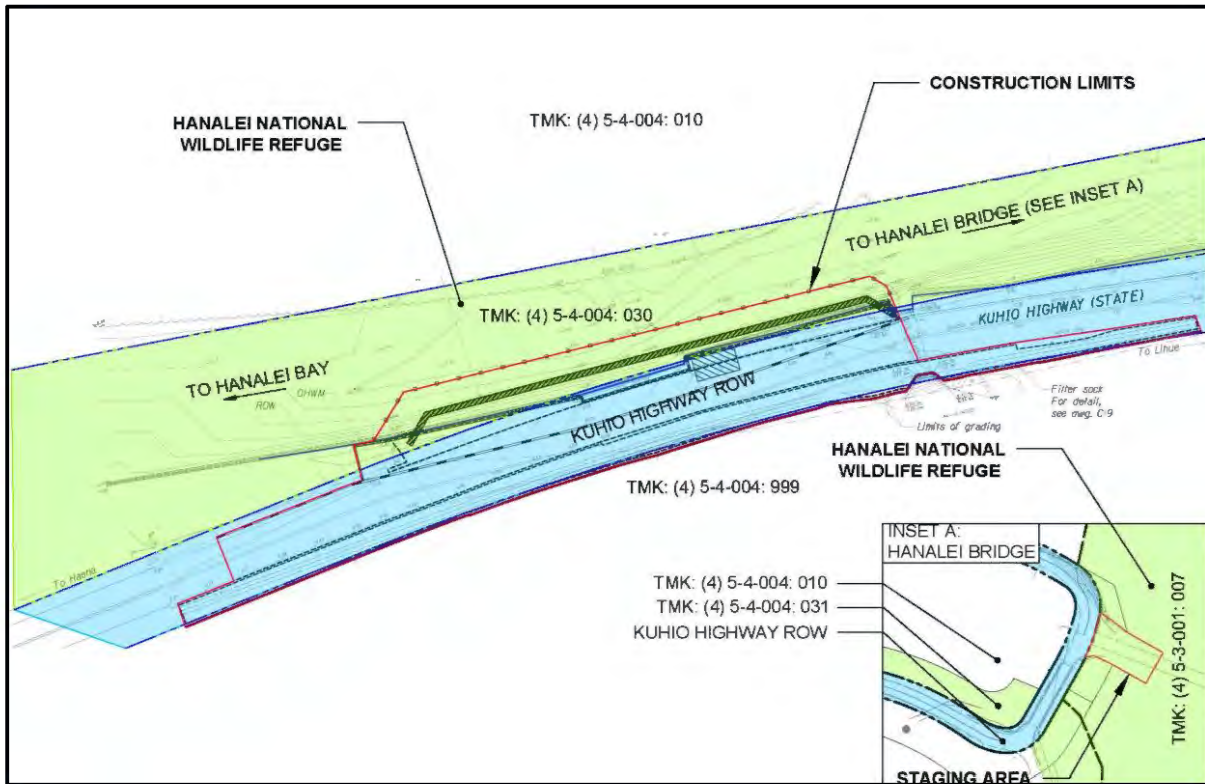
The Proposed Action will realign the roadway to the alignment used prior to the 2022 temporary roadway and replace the pavement with a new pavement structure. In addition, the associated roadway appurtenances (guardrails, shoulder, etc.) will be reconstructed.

During the planning and design process, HDOT recognized that the stabilization work will impact the river, the river bottom and extend into the land parcel owned by the Federal government. The land parcel impacted is part of the HNWR. HDOT entered negotiations with HNWR to perform a property exchange (the property exchange is detailed in the Preferred Alternative).

During construction, there will be impacts to traffic flow and potential transportation delays. The Proposed Action will include Best Management Practices (BMPs), erosion and sediment control measures to minimize the impact outside of the project area, cultural resource protection measures, and measures to mitigate potential impacts to waterbirds, seabirds, and native avifauna.



**Figure 1. VICINITY MAP**



**Figure 2. PROJECT CONSTRUCTION SITES**

## 1.2 Purpose and Need for the Proposed Action

Presently, Kuhio Highway is the only roadway connecting Hanalei to the rest of Kauaʻi. A failure of the roadway would remove the only means of vehicular access between Hanalei and the rest of Kauaʻi, leaving residents and businesses stranded. Currently, scouring has undermined the northern edge of the highway and destabilized the riverbank. The undermining has caused damage to the highway's subgrade, base course, asphalt pavement, shoulder, and guardrail, presenting a continued risk of degradation, that compromises the structural integrity of the roadway and the safety of its users.

The purpose of the Proposed Action is to facilitate the safe and efficient movement of surface vehicular traffic between Hanalei and the rest of Kauaʻi by maintaining a paved roadway with adequate shoulders and required appurtenances near milepost 1.7. These improvements will maintain the critical surface transportation link for residential, government, and business interests of the area, and the historic route. The improvements will provide a roadway with the same capacity volume and will have a similar roadway level of service (LOS) as the existing roadway.

### 1.3 Background

State Route 560 is the only surface transportation link between the Hanalei community and the rest of Kauaʻi. The route has a terminus in Princeville at the intersection of Route 560 (Prince Kuhio Highway), Ka Haku Place, and Route 56 (Kuhio Highway). The other terminus is at the end of the roadway, on Hanalei Point (Hāʻena State Park - Kalalau trailhead).

The roadway has been under the jurisdiction of the Hawaiʻi Department of Transportation since 1968. HDOT has conducted repairs, maintenance, and minor improvements. The roadway and its significance to the Hanalei community have been well documented, especially since circa 1975 with the community response to HDOT's plan to replace the Hanalei Bridge.

Over the years, HDOT and the community have developed a working relationship to maintain the roadway, including the preparation of the *Kuhio Highway (Route 560) Historic Roadway Corridor Plan (2005)*. The route is listed on the State Inventory of Historic Place (SIHP No. 50-30-02-02334) and was added to the National Register of Historic Places in 2003.

The Proposed Action is located within the HDOT HWY right-of-way and partially overlaps with land used for the HNWR. HDOT maintains authority over the roadway and its right-of-way, and the USFWS holds jurisdiction over the refuge lands and associated natural resources. In addition, due to the historic designation, the State Historic Preservation Division (SHPD) has regulatory jurisdiction over any actions that may affect the historic integrity of the roadway.

### 1.4 Project Vicinity

The project area is located along the Hanalei River in Hanalei Valley on the northern shore of Kauaʻi. The Hanalei River flows into Hanalei Bay. Hanalei Valley is known for its lush greenery, taro (*kalo*) cultivation, and diversified agriculture crops. The agricultural use of Hanalei Valley goes back centuries with major crops being taro and rice.

A portion of the Project Site is within the Hanalei National Wildlife Refuge (HNWR). HNWR is host to native and non-native plant and animal species and is an important refuge for threatened and endangered species. The HNWR is closed to the public and is owned and managed by USFWS.

## 1.5 Summary of Impacts and Mitigation

It is anticipated that the Preferred Alternative will not have any significant impacts to the environment and community. To maintain the current scenic value of the area, the Proposed Action will not be noticeable from the roadway and will use a vegetated mat of the native plant, such as *'Ilie'e*, to minimize aesthetic impacts from the river. The Proposed Action may have short-term temporary impacts during construction for noise and surface transportation. In addition, the wetland area will be protected from construction impacts with a temporary construction fence.

The Preferred Alternative incorporates an erosion control plan (ECP) natural resources BMPs and construction BMPs. All activities will comply with applicable Federal and State regulations, including Hawai'i State noise standards. The project design includes the natural resources BMPs to minimize and reduce the impacts to listed species, avifauna, seabirds, and aquatic wildlife. The natural resources BMPs include compliance with the Hawai'i Department of Land and Natural Resources (DLNR) "dark skies" program for light emissions and impact on seabirds.

To avoid construction impacts on the river/ocean inhabitants, the following natural resources BMPs are recommended, to minimize or avoid impacts from underwater sound emissions:

- The implementation of "soft starts" (use of a low energy start) would minimize potential impacts to fish, since they would likely leave the area as drilling commenced.
- Conduct underwater acoustic monitoring to gather site-specific sound (decibels [dB]) data on ambient levels in the area, as well as noise generated from sheet pile installation.

## 1.6 List of Permits and Approval

The following are the major permits which need to be acquired from the Federal, State and Kaua'i County. Avoidance, minimization, and mitigation (AMM) measures are incorporated into the project design and shall be implemented as applicable.

### Federal Permits

- Clean Water Act (CWA) Section 404 Permit
- Rivers and Harbors Act, Section 10 Permit
- National Pollutant Discharge Elimination System (NPDES) Permit for Dewatering.

#### State of Hawai‘i Permits

- CWA Section 401 Water Quality Certification
- Community Noise Permit or Variances
- Stream Channel Alteration Permit (SCAP)
- Land acquisition Approval from the Board of Land and Natural Resources
- Coastal Zone Management (CZM) Section 307
- HRS Chapter 6E
- HRS Chapter 195D
- DOT-Highways Permit for oversized/overweight transport on State of Hawai‘i highways, if applicable.
- Conservation District Use Permit (CDUP), if required.

#### County of Kaua‘i Permits

- Special Management Area (SMA) – Major
- Grading Permit

The Hanalei River is designated as an American Heritage River and this designation does not impose additional permitting requirements. The Preferred Alternative considers the cultural, ecological, and historical values associated with the Hanalei River. In addition, the Proposed Action does not fall under Section 6(f)(3) as it maintains the land’s current conservation and public recreation purpose.

### **1.7 Early Consultation**

HDOT involved the community early in the planning and design process by holding a meeting held on June 8, 2022. At the meeting, HDOT presented various types of structural improvements which may stabilize the riverbank and provide structural strength to support the affected roadway. The initial list of potential solutions included:

- Sheet piles
- Rip-rap (un-grouted rocks of approximately 15 inches in diameter)
- Vegetated earth reinforced wall (bank)
- Rock marine mattress (partially vegetated)
- Vegetated earth reinforced wall with sheet pile hybrid
- Rock marine mattress with sheet pile hybrid



The potential effectiveness, relative costs, and impacts of each of these potential solutions were placed in a matrix, shown in Exhibit 1. This matrix was shared with the public, and based on public comments and design requirements, HDOT selected the “vegetated earth reinforced wall and sheet pile hybrid” as the design alternative. As HDOT continued with the planning and design process, the preferred alternative was modified to include a pile cap, with a boulder-scape finish, over the sheet pile for strength and aesthetics.

	Sheet Piles	Rip-Rap (un-grouted)	Vegetated Earth Reinf. Wall	Rock Marine Mattress	Vegetated Earth Reinf. Wall + Sheet Pile Hybrid	Rock Marine Mattress + Sheet Pile Hybrid
Meets Strength requirements associated with scour	✓	✓	✓	✓	✓	✓
Little or no encroachment into stream	✓	✗	✗	✗	✓	✓
Natural aesthetics	✗	✓	✓	✓	✓	✓
Lower cost	✓	✓	✗	✗	✗	✗
Fast/easy installation	✓	✗	✗	✓	✗	✓
Does not require dewatering	✓	✗	✗	✗	✓	✓
Repressed excessive noise	✗	✓	✓	✓	✗	✗
Highest level of roadway protection	✓	✗	✗	✓	✗	✓
Easily accessible materials	✓	✓	✗	✗	✗	✗

Exhibit 1. Potential Embankment Solutions Matrix

In addition, to provide additional input opportunities for the agencies, organizations, and individuals, HDOT-HWY sent preconsultation letters via U.S. Postal Service (USPS) and electronic mail (e-mail) on March 29, 2024. The mailing list, preconsultation letter, and responses are presented in Appendix A.

The response topics included:

- Preparation of the HRS 343 Environmental Assessment
- Rendering of the riverbank stabilization
- Compliance with Section 10 of the of the Rivers and Harbors Act (RHA) of 1899 and Section 404 of the U.S. Clean Water Act.
- Floodway impacts
- Erosion and Sediment Control and Best Management Practices
- Impacts on listed (endangered and threatened) species and seabirds.
- Invasive species impacts.

### **1.8 Distribution of Draft Environmental Assessment**

The distribution list for the Draft EA is included in Appendix B. Letters will be sent announcing the availability of the Draft EA.

## CHAPTER 2

### DESCRIPTION OF PREFERRED ALTERNATIVE AND ALTERNATIVES

#### 2.1 Preferred Alternative to the Proposed Action

HDOT involved the community early in the planning and design process by holding a community meeting in June 2022 in Hanalei. Based on input from the community, the preferred design alternative for the riverbank stabilization was the “vegetated earth reinforced wall and sheet pile hybrid.” As HDOT continued with the planning and design process, the preferred design alternative was modified to include a pile cap, with a boulder-scape finish, over the sheet pile for strength and aesthetics.

The Preferred Alternative (Figure 3) shows the riverbank stabilization extending into the river bottom to prevent scouring and undermining of the riverbank. A concrete “pile cap,” extends above the mean water surface elevation by approximately two (2) feet and is designed to retain the existing and re-constructed riverbank. The new riverbank will be constructed with a vegetated earth reinforced slope using a “native plant vegetative mat” over geotextile bags filled with planting medium. The geotextile bags are held in place using a geogrid system with geogrid wrapping.

Native plants will be planted to form a “native plant vegetative mat” along the bank to provide a “greenscape”, stabilize the riverbank, and minimize erosion of the constructed riverbank. An artist rendering of the improvements is shown on Figure 4. The vegetation type was selected in consultation with a vegetation specialist and the Hanalei community, based on the local environmental conditions (weather, climate, exposure, etc.) and availability. The use of *Ilie'e* was recommended and will be considered in the final design.

The Preferred Alternative is shown on Figure 5 and presents the overall Project including the properties to be exchanged, the main construction site, and the staging area. The HDOT proposes demolishing the existing roadway and appurtenances that are affected by the scoured riverbank. As part of the initial construction, the roadway will be realigned within the HDOT right-of-way to provide a safe travel way between Hanalei and Princeville. The roadway realignment will be reconstructed on the original roadway alignment prior to 2022. The existing pavement structure will be demolished and a new pavement structure with similar pavement strength will be constructed. HDOT will also construct associated roadway appurtenances, such as guardrails, shoulders, etc. The roadway realignment is presented in Figure 6.



The Preferred Alternative will include a remote staging area on the property to be exchanged. The land area used for staging is used as a driveway and was previously used for construction staging. The staging area will have construction BMPs for erosion control.

The Preferred Alternative will exchange property impacted by the improvements from HNWR, at a ratio of 2.2 to 1. The proposed property exchange with HNWR involve acquiring 3.62 acres of United States of America (U.S.) properties, currently managed by the USFWS. In return, HDOT will transfer 8.05 acres of State of Hawai‘i owned properties to the U.S. Properties acquired by HDOT will be along the Hanalei River and Kuhio Highway in TMK (4) 5-4-004:030 and 031, (4)-5-3-001:007 and (4) 5-4-003:007. The State of Hawai‘i will transfer land from TMK (4) 5-4-004:999. The parcel acreages are shown in Table 2 and shown on Figure 7.

**TABLE 2**  
**LAND ACREAGES AND TMK FOR PROPERTY EXCHANGE**

<b>Property Owner</b>	<b>TMK</b>	<b>Parcel size (acres)</b>
United States of America	(4) 5-4-004:030	0.55
United States of America	(4) 5-4-004:031	0.46
United States of America	(4) 5-4-003:007	0.79
United States of America	(4) 5-3-001:007	0.30
United States of America	(4) 5-3-001:007	1.52
State of Hawai‘i	(4) 5-4-004:999	8.05

The property in TMK (4) 5-4-004:030 will be used for the development of the riverbank stabilization project, and a portion of TMK (4) 5-3-001:007 will be used for construction staging (0.07 acres) as shown on Figure 2. The development of these two parcels is covered in this EA. The use of the 1.52 acre in parcel 5-3-001:007, 0.46 acres in parcel 5-4-004:031, and 0.79 acres in TMK 5-4-003:007 will serve as the Kuhio Highway right-of-way and will be reserved for potential future highway use which is not ripe for decision making. The property at the Ka Haku Road and Kuhio Highway intersection is on TMK (4) 5-3-001:007 and will become part of the highway right-of-way.

At this point in time, no development on parcel 5-4-004:999 is foreseen by HNWR, and therefore, the development of this parcel is not ripe for decision making. In the future, if HNWR proposes improvements to this parcel, HNWR will follow their National Environmental Policy Act (NEPA) guidance to determine and prepare the appropriate environmental documents.

The project construction site has an area of approximately 0.69 acres (30,000 sq. ft.) and an off-site staging area of approximately 0.07 acres (3,100 sq. ft.). The main Project Site (excluding the staging area) is approximately 300 linear feet in length, measured along the roadway centerline. The project will involve various excavation and fill activities. Roadway excavation is estimated at 175 cubic yards (CY), while structural excavation for the sheet pile and vegetated earth-reinforced streambank is estimated at 98 CY. The primary focus will be on filling the eroded streambank with concrete, Envirolok bags, and structural fill. This includes the installation of a 250-linear-foot (LF) sheet pile wall, 66 CY of geotextile bags, 89 CY of concrete for the pile cap and boulderscape, 83 CY of concrete for the wall portion beneath the pile cap, and 167 CY of structural fill beneath the Envirolok system. The Preferred Alternative will dredge approximately 273 cubic yards of material which will be disposed of or recycled in accordance with Kaua'i County, State of Hawai'i and Federal rules and regulations. The project will include an ECP that is in compliance with the County of Kaua'i Ordinance No. 808 as well as HDOT's guidelines.

During construction, the ECP will include construction BMPs used to minimize or deter runoff from the construction site into the Hanalei River to maintain water quality. In addition, a small wetland on the current roadway shoulder will be protected from construction impacts. The main components of the ECP are a turbidity curtain in the river, filter socks, and temporary sediment barrier at the drain inlet. The sheet pile, geotextile bags, and vegetation mat will serve as permanent BMPs for the project area. In addition, denuded stream banks will be planted or covered as quickly as possible, stream maintenance during periods of minimal rainfall, and providing measures to prevent construction materials to enter the Hanalei River. Daily inspections will be conducted and any construction debris will be removed from the Project Site if not actively used and/or at the conclusion of the day.

The Preferred Alternative also includes natural resources BMPs to minimize and reduce the impacts to listed species, including listed avifauna, seabirds, and aquatic wildlife. To further minimize or avoid impacts to Hawai'iian waterbirds species, following natural resources BMPs are included in the design:

- Post and implement reduced speed limits in areas where waterbirds are known to be present and inform project personnel and contractors about the presence of endangered species on-site or nearby.
- If an endangered waterbird enters an active construction area, cease all construction activity. Work may resume after the individual leaves the area on its own volition.
- Avoid creating surface water features (puddles, etc.) after grading and grubbing. Surface water should be removed to avoid creating a nuisance attractant.

- A qualified biologist should conduct a preconstruction survey for endangered waterbird nests immediately prior to construction activity near water features. If a nest is found, contact USFWS immediately.
- Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
- There may be a potential impact on the Hawaiian hoary bat if trees (greater than 15 feet tall) are being felled. The disturbance associated with removal of any particular tree would be insignificant. However, an exception occurs during the bat pupping season, when a female bat carrying a pup may be unable to rapidly vacate a roost tree that is being felled; or an unattended pup is unable to flee a tree that is being felled.
- To avoid any potential adverse impacts from woody vegetation taller than 4.6 m (15 ft), tall woody vegetation should be performed before June 1 and after September 15<sup>th</sup>. The period in which bats may have pups is between June 1 and September 15<sup>th</sup>.
- The Preferred Alternative shall not use barbed wire fencing.
- Protect the endemic Hawaiian Short-Eared Owl (*Pueo*) (*Asio flammeus sandwichensis*) which could potentially nest on the ground in this area. Therefore, prior to undertaking ground-based disturbance, a qualified biologist will conduct line transect surveys during crepuscular in the Project Site. If a Hawaiian Short-Eared Owl nest is discovered, a minimum buffer distance of 100 meters from the nest should be established until chicks are capable of flight.

In addition, the following is to minimize and reduce the impacts to Hawaiian seabirds at night:

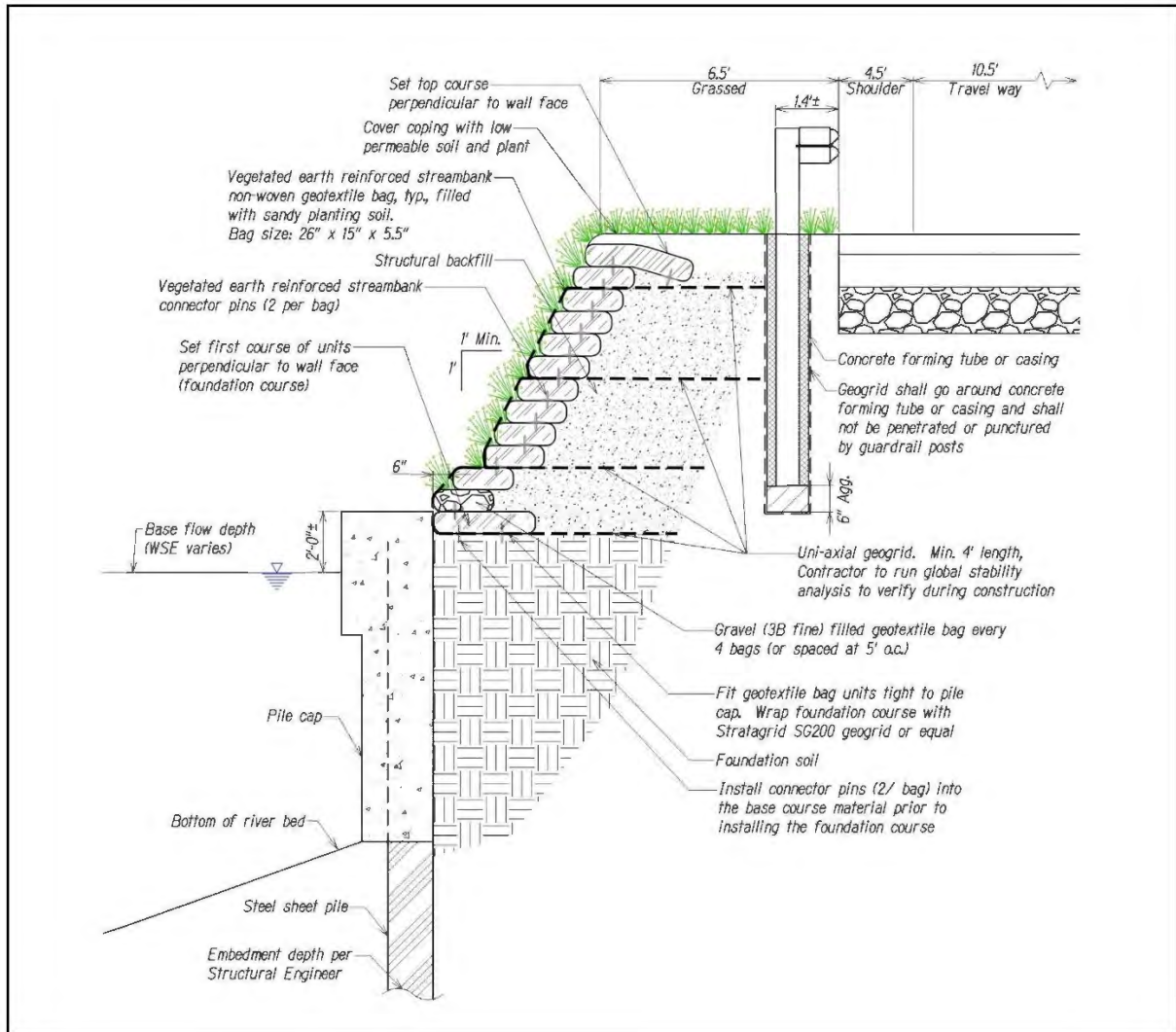
- Night-time construction should be avoided during the seabird fledging season that extends from September 15<sup>th</sup> through December 15<sup>th</sup> each year. This minimization will ensure that fledgling birds are not attracted to and disoriented by construction lights.
- Any exterior lighting related to the Project should be “dark sky” compliant and shielded as specified in the Hawai‘i Department of Land and Resources, Division of Forestry and Aquatic Resources guidelines for seabirds.

To minimize cultural impacts, HDOT will work with the community on the following actions as part of the Preferred Alternative.

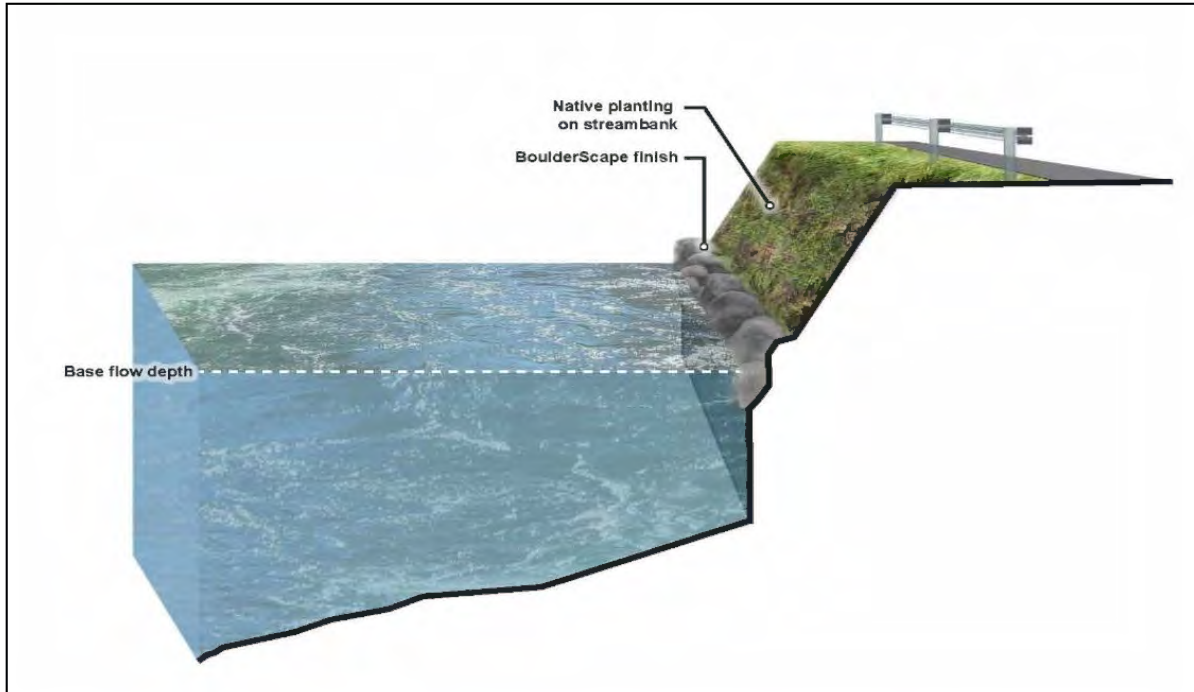
- Work with the community to find solutions if the proposed project affects the use of the HDOT-HWY right-of-way at the Hanalei River.
- Support consultation with *kānaka* who are willing to work with the State, such as the *Sheehan 'ohana*, to find solutions to Hanalei's active issues, including flooding and alternative routes to and from Hanalei.
- Enlist an archaeological monitor and a cultural monitor to observe all ground-disturbing project work to minimize potential impacts to cultural resources such as *iwi kūpuna* (ancestral bones). If cultural resources are found during project work, a plan will be developed to protect these resources in consultation with cultural stakeholders/organizations and appropriate government agencies.

## 2.2 No-Action Alternative

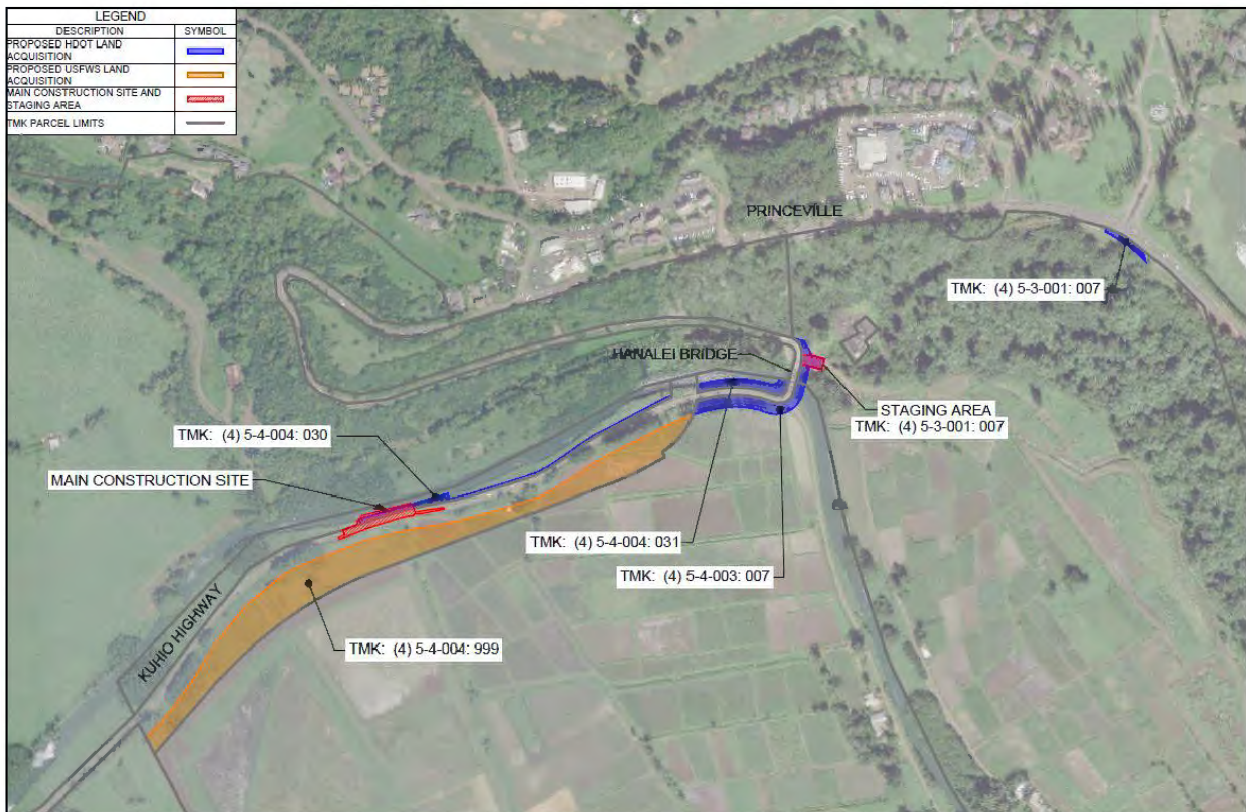
The No-Action Alternative would leave the roadway, shoulder and Hanalei riverbank in its existing condition. As the scouring continues, the riverbank will continue to be eroded, undermined and eventually slide into the Hanalei River. As the erosion and undermining continues, the shoulder and roadway will fall into Hanalei River. As this continues and creeps inland, the roadway would not be usable and will terminate the only surface transportation link from Hanalei to the rest of Kaua'i. Over a long period of time, there is a potential to impact the farmlands across the embankment.







**Figure 4. ARTIST RENDERING OF THE PREFERRED ALTERNATIVE**



**Figure 5. PREFERRED ALTERNATIVE**

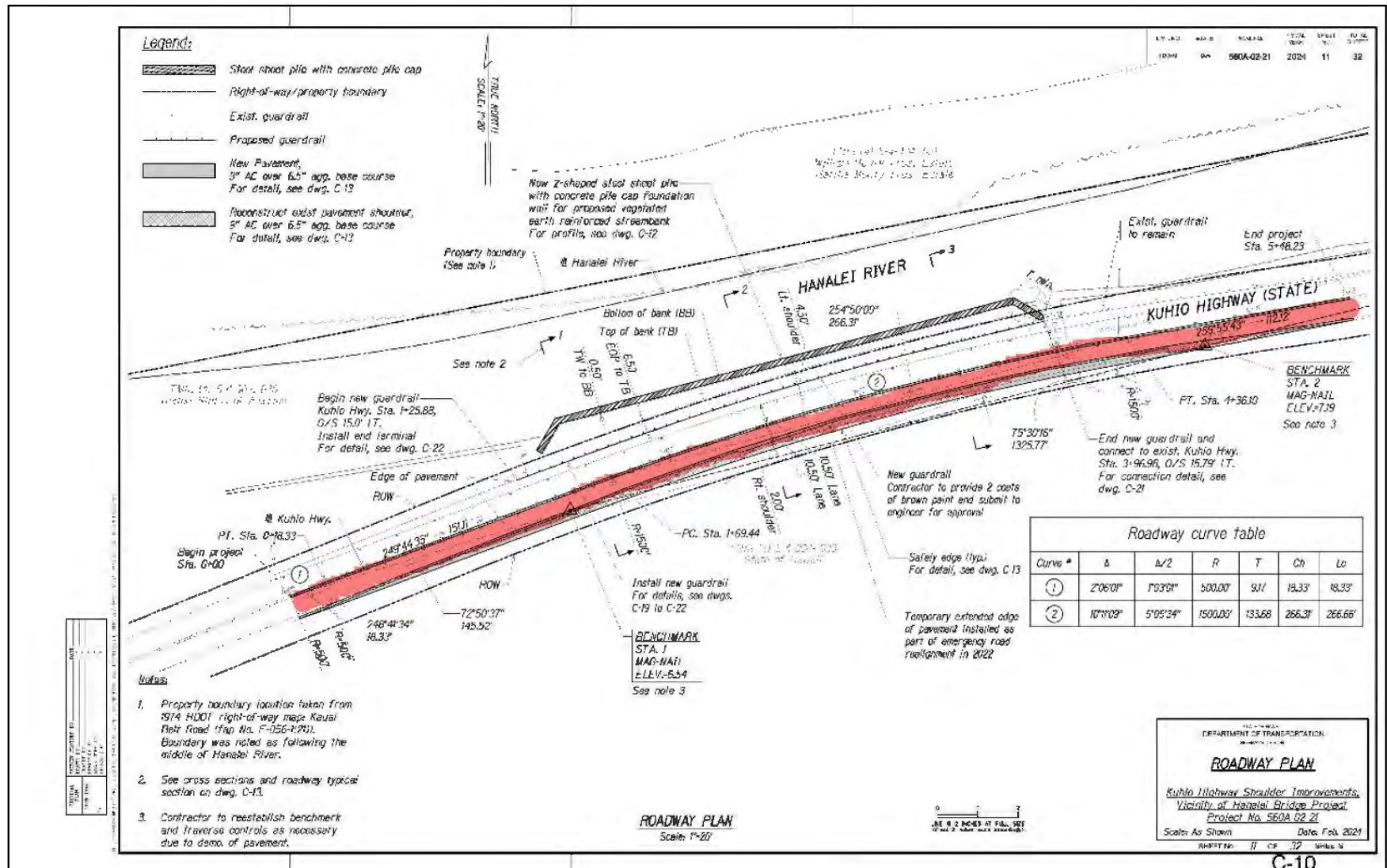


Figure 6. PREFERRED ALTERNATIVE - ROADWAY REALIGNMENT



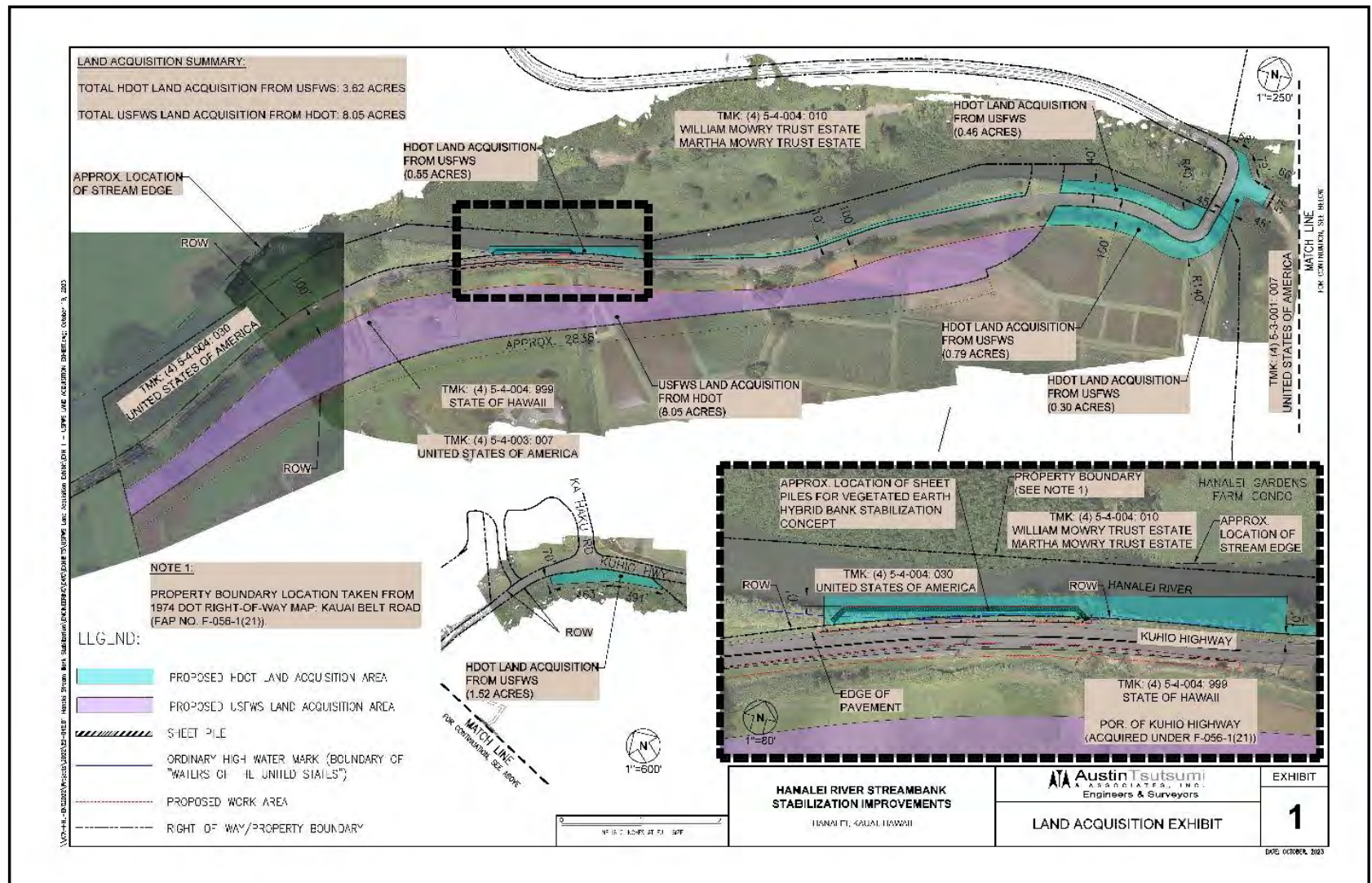


Figure 7. PREFERRED ALTERNATIVE - PROPERTY EXCHANGE



## CHAPTER 3

### DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL ENVIRONMENTAL IMPACT, AND MITIGATION MEASURES

This section describes the existing conditions and alternative analyses for a variety of environmental impact categories in the Proposed Action area. To the extent practical and applicable, well-established and accepted analytic and scientific techniques have been used to evaluate the potential effects of the Proposed Action. As much as possible, conclusions or estimates of likely effects were made using the appropriate Federal or State standards, or applicable objective criteria.

Dubbed as one of the most beautiful bays and valleys in Hawai‘i, Hanalei is the largest land (*ahupua‘a*) within Halele‘a, extending from the Pacific Ocean, along the Hanalei River to the summit of Wai‘ale‘ale, for approximately 11 miles [17.70 km]. The headwaters of the river flow through a narrow mountain valley with scores of tributaries. A great portion of the *ahupua‘a* contains mountainous terrain, where the Hanalei River descends towards the ocean (*makai*).

The valley floor is an alluvial flood plain covered with taro pond fields (*lo‘i kalo*), and the riverbanks are lined with thickets of hau (a wetland tree [*Hibiscus tilitaceus*]). Bordering the alluvial plain to the north is the sandy coastal strip of beach along Hanalei Bay and the outlying fringing reefs.

### 3.1 Climate and Air Quality

#### 3.1.1. Existing Conditions

Hanalei is well-known for its rains; one of the most common is *Ka ua loku o Hanalei*, or “soaking rain of Hanalei.” Another rain is the *Hehi pua hala*, or the stepping upon pandanus flowers. The plains of Hanalei once were covered with pandanus (*hala*), and the rain also corresponds with *Po‘okū*, a hill above the Hanalei River where a heiau once stood. There is also the rain *Lena* (yellow) that has a yellow tint as it falls in the sunshine. *Ka ua hā‘oa*, or “gentle rain,” and its showers fall over *Hīhimanu* like individuals in a chief’s court that came in procession of sections or divisions. The favored rain of fishermen is *Kū‘ula o ‘Anini*, which means “red *Kū* of ‘Anini.” Hanalei’s winds can be cool or raging.

At *Hanalei iki* just above the river mouth, there is a gentle breeze called *Hauka ‘e‘e o Hanalei iki*, or “dried up dews of *Hanalei iki*.” There are several winds considered to be life giving: *Hau mu*, “silent dew;” *Hau ōma‘o*, “green dew;” or *Lūhau o Hanalei uka* “scattered dews of upland Hanalei.”

Fishermen felt lucky when the *Līhau o Lanihuli*, (“gentle cool rain of *Lanihuli*”) blew over the river or the sea. The unlucky winds were ‘*Ōla niu o Pu‘u Poa*, or “coconut leaf piercing wind of *Pu‘u Poa*,” and *Pae hahi o ka-iholena*, which means “row of trampled *iholena* (banana trees).”

The Western Regional Climate Center<sup>1</sup> has historical records for rainfall station near Hanalei, one at Princeville Ranch and the other in Wainiha. The average annual rainfall at Princeville Ranch is 81.65 inches, and the annual rainfall at the Wainiha Station is 119.96 inches.

The predominant winds are from the tradewinds from the north to north-east direction. Kona or southerly winds funnel down the valley to the Project Site. Similar to Hawai‘i’s seasonality, Hanalei has a drier period from June to September and a wetter period from October to May. The Project Site is in the Hanalei River floodplain, and flooding has caused damage to the roadway and community in the past.

The State of Hawai‘i is in an attainment zone and meets Federal Air Quality Standards. The majority of the air emissions in the project area are from motorized vehicles transiting on Kuhio Highway. There is an air quality monitoring station (Niumalu) which measures Sulfur Dioxide (SO<sub>2</sub>), on Hulemalu Road in Lihue, Kaua‘i. In 2024 the annual average was 0.001 parts per million by volume (ppm), which is well below the State standard of 0.03 ppm for the annual average.

### **3.1.2 Alternative Analysis**

The Preferred Alternative and the No-Action Alternative shall not alter wind flow, rainfall, and the volume of air emissions in the project area. Therefore, the Preferred Alternative and the No-Action Alternative shall have no significant impact on air quality.

During construction, there will be a temporary increase in air emissions from the construction equipment and vehicles. In addition, there may be short periods of increased congestion that will increase idling and vehicle emissions. These potential impacts will be temporary and are not significant impacts.

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<sup>1</sup> <https://wrcc.dri.edu>

**Construction Mitigation Measures.** Although the short period construction impacts are insignificant, under the State of Hawai‘i, Air Pollution Control Regulations, visible emissions of fugitive dust from construction activities at the property line are prohibited. Thus, an effective dust control plan for the project construction phase will be essential. Construction activities must comply with the provisions of HAR Title 11, Chapter 60.1 (HAR 11-60.1) and HAR 11-60.1-33 on fugitive dust. Adequate fugitive dust control can be accomplished by the following measures provided by the Hawai‘i Department of Health (DOH), Clean Air Branch (CAB), Fugitive Dust Fact Sheet (October 2014):

- Designing, developing, and implementing a dust-control plan
- Focusing on minimizing the amount of dust-generating materials and activities, centralizing material transfer points and onsite vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact
- Providing an adequate water source at the site, prior to the start of construction activities
- Controlling dust from shoulders, project entrances, and access roads
- Providing adequate dust control measures during weekends, after hours, and prior to daily startup of construction activities
- Using a frequent watering program to prevent bare-dirt surfaces from becoming significant dust generators
- Limiting the area that can be disturbed at any given time
- Applying chemical soil stabilizers or mulching
- Installing dust screens or a wind barrier around construction site
- Requiring all open-bodied trucks shall be covered when transporting dirt- or dust-producing materials
- Requiring road cleaning, vehicle tracking pad, and/or tire washing, as appropriate
- Paving of parking areas, and ingress and egress points
- Establishing landscaping early in the construction process to limit areas of possible dust production

The incorporation of these measures, as applicable, will further reduce the impact to air quality from the proposed improvements.

## 3.2 Land Use

### 3.2.1 Existing Conditions

The Hanalei Valley has been in agricultural production from pre-contact until present, due to the amount of freshwater and fertile soil from the Waioli and Hanalei Rivers. Major agricultural crops included kalo, sweet potato, and rice. The present land uses in the valley include agriculture and rural residential communities.

The project will be within HDOT's right-of-way, and a portion will be in the current alignment of the Hanalei River, as shown on Figure 2. The in-water portion encroaches on the Hanalei National Wildlife Refuge's current land holdings, and therefore, the Preferred Alternative includes a property exchange to remedy the encroachment. The current land use within the HDOT's right-of-way is a roadway.

The State of Hawai'i controls the land use within the State and separates the land into four (4) land use categories: Conservation, Agriculture, Urban, and Rural. The State transfers authorities within the Urban, Agriculture, and Rural Land Use categories to the County. The project area is within the State of Hawai'i Agriculture land use category. In TMK (4) 5-3-001:007, the staging area is designated as Conservation land, while the proposed HDOT land acquisition area within the same parcel is designated as Urban.

The County of Kaua'i zoning maps designates the TMK (4) 5-4-004:030 and 031 as Agricultural, TMK (4) 5-4-003:007 and the staging area as Open Space, and TMK (4) 5-3-001:007 as Conservation.<sup>2</sup>

### 3.2.2 Alternative Analysis

The Preferred Alternative and the No-Action Alternative will not require significant changes to the State Land Use or County Zoning. The land use of the existing State of Hawai'i lands and those properties to be acquired from the U.S. will be used as the HDOT's right-of-way as a roadway. The land use of the properties acquired by the U.S. is expected to become part of HNWR and the land use will remain the same at this point in time.

The land use classification of the lands acquired from the U.S. will be within the agricultural land use, and the lands acquired by the U.S. will be taken out of the State of Hawai'i land use and County of Kaua'i zoning classifications. These U.S. land will be classified as Federal lands.

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<sup>2</sup> Kauai Zoning Maps – GIS, [County of Kauai Zoning Map](#), January 13, 2025.

Therefore, there is no significant impact to land use by the project. The State will have 4.43 acres removed from the State's jurisdiction. The acquired land will need to be reclassified, as required.

### 3.3 Noise

#### 3.3.1 Existing Condition

The area is an open area, with no development in the area, and within a large agricultural area. The ambient noises in the area would include those related to wind, wildlife, and Hanalei River. There are no industries, residences, or businesses in the immediate area.

In the project area, the existing noise levels will be emitted by vehicle traffic on Kuhio Highway and dependent on the vehicle type and speed. The vehicles or farmers within the farming areas will also generate noise during farming operations. The vehicle noise levels would be in the range of 70 to 80 decibels A-weighted (dBA) about 50 feet from the Highway<sup>3</sup>. The noise will vary with the vehicle type, engine, and speed.

#### 3.3.2 Alternative Analysis

The Preferred Alternative will not increase surface traffic through the area and therefore will not have significant impact on noise. With the No-Action alternative, the riverbank will continue to erode to the point where there is no roadway, and therefore, no vehicular noise.

**Construction Related Noise Impacts.** During construction, there will be a temporary increase in noise due to the use of construction equipment. The construction will follow all Federal and State rules and regulations, included but not limited to the noise regulations from the State of Hawai'i, Department of Health, Indoor and Radiological Health Branch, Noise Section. A Community Noise Permit will be obtained as the construction value is greater than \$250,000 from the Hawai'i Department of Health.

The driving of the sheet piles may have a noise level as high as 101 dBA, measured 50 feet from the activity. This noise level is based on a pile driver, and the actual noise will be dependent on construction methods.<sup>4</sup> Other construction methods will have lower source noise levels.

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<sup>3</sup> U.S. Environmental Protection Agency, *Transportation Noise and Noise from Equipment Powered by Internal Combustion Engines*, December 31, 1971.

<sup>4</sup> U.S. Department of Transportation, Federal Highways Administration, *FHWA Highways Construction Noise Handbook*, Final Report, FHWA-HEP-06-015, DOT-VNTSC-FHWA -06-02, NTIS No. PB2006-109012, August 2006.

Pursuant to the State of Hawai‘i Department of Health Noise Rules, pile driving is restricted to the hours of 9:00 am to 5:30 pm. on Mondays to Fridays. Other vehicles such as the larger equipment will create noise footprints. If construction work exceeds the maximum permissible sound levels before 7:00 a.m. and after 6:00 p.m., Monday to Friday, or before 9:00 a.m. and after 6:00 p.m. on Saturdays, or at any time on Sundays & Holidays the Contractor will need to obtain an approved Community Noise Variance from the State of Hawai‘i, Department of Health.

### **3.4 Geologic and Groundwater Conditions**

#### **3.4.1 Existing Conditions**

The project area is within the Hanalei River and Hanalei Valley floor with soils developed from alluvium. The soil type in the project area is categorized as Hanalei Silty Clay<sup>5</sup>, with a zero (0) to six (6) percent slopes. The soil is hydric, in alluvium and frequently ponds during extended rainfall periods.

The existing roadway has an elevation of approximately 6.5 feet above mean sea level and has a relatively flat slope. The riverbank in this area is almost vertical. The project area does extend out of the roadway right-of-way and into the Hanalei River. Due to the location of the project, the ground water table is fairly shallow.

#### **3.4.2 Alternative Analysis**

The Preferred Alternative will require soil removal to develop the vegetated riverbank to support the roadway structure and appurtenances. The Preferred Alternative includes an erosion control plan with construction BMPs. A sheet pile wall will be constructed into the river bottom to prevent further erosion and to provide structural support. The Preferred Alternative shall not have significant impacts on the geology or ground water in the area.

The No-Action Alternative will allow the soil to continue to erode as the riverbank is unprotected. Therefore, the geology of the area will be altered and would have a significant impact on the area. In addition, the eroded soil would create other environmental issues downstream of the Project Site.

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<sup>5</sup> *United States Department of Agriculture, Soil Conservation Service, and University of Hawai‘i , Agricultural Experiment Station, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawai‘i , August 1972.*

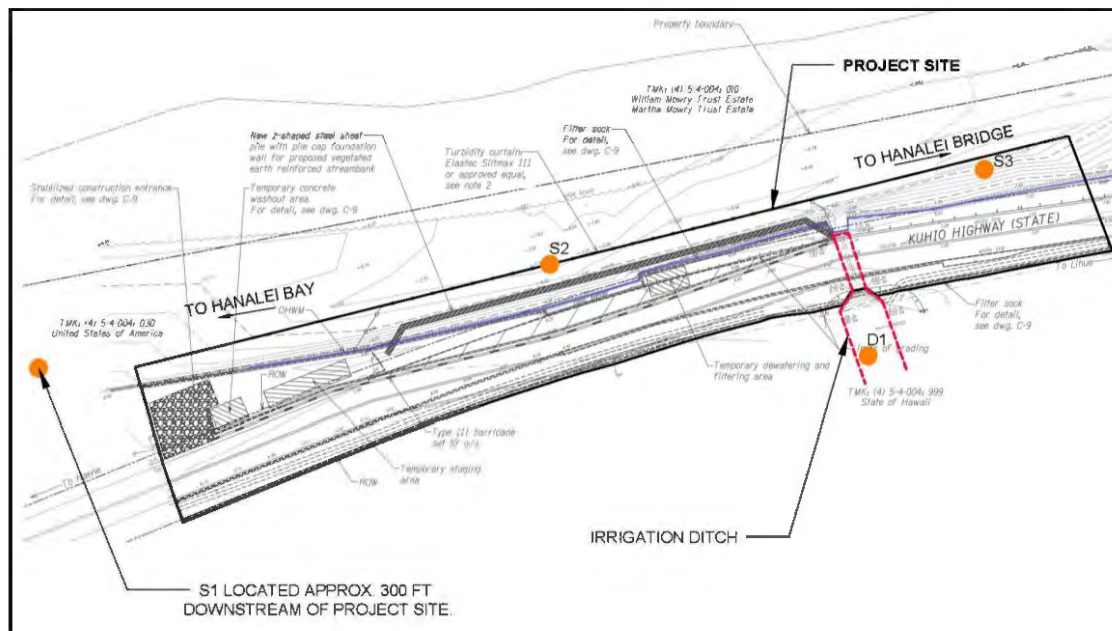
### 3.5 Water Quality

#### 3.5.1 Existing Conditions

A water quality survey was conducted for this EA to characterize Hanalei River at the Project Site, by AECOS, and presented in Appendix C. The survey measured water quality at seven (7) water quality stations in the river, the irrigation tributary, and at the mouth of the river and shown on Figure 8.

At each station, *in situ* field measurements of temperature, conductivity, salinity, and dissolved oxygen (DO) were obtained. In addition, temperature, conductivity, and salinity were measured in the water column to determine if Hanalei River is stratified. The water sampling results for Hanalei River are shown on Table 2. The results show that the river is not stratified. The Hanalei River empties into the Pacific Ocean at Hanalei Bay, which is considered Marine Classification AA by the State of Hawai‘i, Department of Health. The AA classification is the highest marine water quality classification and is defined as (Hawai‘i Administrative Rules (HAR) Chapter 11-54)

*It is the objective of Class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected.*



**Figure 8. WATER SAMPLING SITES NEAR THE PROJECT SITE**

Note: Station S1 is located approximately 300 feet downstream of the Project Site.



**TABLE 3**  
**WATER QUALITY IN HANAIEI RIVER**  
**JANUARY 6, 2022**

Station	Temp.	Conductivity	Salinity	pH	DO sat.
	(°C)	(µmhos/cm)	(psu)		(mg/L)
S3	20.5	98.8	<1.0	6.94	7.05
D1	22.3	58.6	<1.0	7.00	4.76
S2	21.9	103	<1.0	6.98	5.90
S1	21.8	47.3	<1.0	7.10	6.89

Station	DO sat.	Turbidity	TSS	NH3	NO3+NO2
	(%)	(ntu)	(mg/L)	(□ g N/L)	(□ g N/L)
S3	78	4.62	3.8	16	40
D1	54	21.0	24	65	43
S2	67	7.29	7.7	27	40
S1	78	6.26	6.3	19	40

Station	Total N	PO4	Total P	Chl a	Silicates
	(µg N/L)	(µg P/L)	(µg P/L)	(µg/L)	(µg/L)
S3	94	11	30	0.37	8040
D1	194	16	64	2.84	7890
S2	124	14	15	0.62	8160
S1	144	15	56	0.41	7940

According to the U.S. Environmental Protection Agency (EPA)<sup>6</sup>, the water qualities of Hanalei River and Hanalei Bay is impaired for water quality parameters of enterococci and turbidity. Hanalei Bay is identified as an impaired water body for enterococci, turbidity, nitrate+nitrite (NO<sub>3</sub>+NO<sub>2</sub>), ammonium, and chlorophyll-a (chl a)<sup>7</sup>.

<sup>6</sup> [Hanalei Bay Watershed - Kaua'i, Hawai'i | Region 9: Water | US EPA](#), December 18, 2024.

<sup>7</sup> Hawai'i State Department of Health, Clean Water Branch, 2022 *State of Hawai'i Water Quality Monitoring and Assessment Report: Integrated Report to the U.S. Environmental Protection Agency and the U.S. Congress*, April 6, 2022, Final.



### 3.5.2 Alternative Analysis

The Preferred Alternative uses sheet-piles to stabilize the riverbank, which have a smaller footprint than a retaining wall, thus minimizing to the extent possible any impacts to the riverbank.

The Preferred Alternative incorporates construction BMPs for erosion and sediment control and post-construction BMPs, such as a sheet pile wall and the armored vegetative structure to reduce the erosion along the riverbank for this section of the riverbank. Therefore, based on the BMPs implemented, there shall be no significant impact to water quality in Hanalei River and Hanalei Bay.

The No-Action Alternative will allow erosion to continue and therefore, will continue to release sediments into Hanalei River and Hanalei Bay. However, as this is not human-caused alteration, there is no significant impact to the water quality in the Class AA waters.

## 3.6 Historic, Architectural, Archaeological, and Cultural Resources

### 3.6.1 Existing Conditions

The project area is a segment of the historical route known as the Kuhio Highway Route 560 or Kaua'i Belt Road (SIHP 50-30-02-09396 and 50-30-02-02334). In addition, about one-half (1/2) miles east is the historic Hanalei Bridge (SIHP 50-30-03-00736). There are no other historic properties in the project area or immediate vicinity. There are no archaeological or historic resources recorded within the project area.

A Cultural Impact Assessment (CIA) was conducted 2024, in accordance with the State of Hawai'i Cultural Impact Assessment guidance and to fulfill the expectations of the *Ka Pa'akai o Ka 'Āina* analysis. The CIA is presented in Appendix D. The region and valley are culturally important and have a long history of cultural resources which need to be passed on to future generations.

For this project area, the important cultural resource is Hanalei River that provides water and life, recreational resources, habitat, and food. The "cultural consultants" identified the river as a source for shellfish and fish for subsistence. The cultural consultants also identified that the hau bushes (trees) along the riverbanks are an important cultural resource, which needs to be managed better to prevent unwanted or unnecessary problems such as the encroachment into the river. As one cultural consultant stated, "It's up to us as Hawaiians to be able to push for us to be involved in it. It's not just taking out the plants," meaning while the *hau bush* could have adverse impacts, it is important to the Hawaiian culture.

### 3.6.2 Alternative Analysis

The Preferred Alternative will have no impact to historic, architectural, and archaeological resources. The State of Hawai‘i Historical Preservation Division (SHPD) letter for this project (Project No. 2023PR00586, Doc. No. 2312SH04, Archaeology, December 11, 2023, to District Engineer, Kaua‘i, Highways Division) concurs with HDOT’s Section 6E-8 determination of *No historic properties affected*.

The Preferred Alternative shall not have an impact on cultural resources, as the project is designed with BMPs, to eliminate runoff from the project into the river.

As stated in the CIA, the community may use the project to revitalize the culture once practiced in and around the Hanalei River by restoring the *lo‘i kalo* and *‘auwai systems*, practice hale building, *lawai ‘a* and *kilo* to mālama the resources, and work with the State and community to find better solutions with *kilo* and *mālama* of the *hau*, especially when dealing with flooding. In addition, the cultural consultants would like to study roads or routes to egress Hanalei especially during emergency flooding.

The following actions are recommended by HWY-K to further reduce the potential cultural impacts of the Preferred Alternative. The HDOT-HWY will implement actions which are within the HDOT right-of-way.

- Work with the community to find solutions if the proposed project disrupts the use of the Hanalei River.
- Support consultation with *kānaka* who are willing to work with the State, such as the *Sheehan ‘ohana*, to find solutions to Hanalei’s active issues, including flooding and alternative routes to and from Hanalei.
- Enlist an archaeological monitor and a cultural monitor to observe all ground-disturbing project work to minimize potential impacts to cultural resources such as *iwi kūpuna*. If cultural resources are found during project work, a plan will be developed to protect these resources in consultation with cultural stakeholders/organizations and appropriate government agencies.

The No-Action Alternative may have long-term implications on the historic Route 560, as the erosion continues. If the erosion continues over a long period, Route 560 will erode into Hanalei River, thus destroying this portion of the historic Route 560. Any archaeological resources buried and undiscovered in this area will be impacted by the continual erosion of the riverbank. The No-Action Alternative is not anticipated to have any cultural impacts, other than the erosion of the riverbank over time.

## 3.7 Biotic Communities

### 3.7.1 Existing Conditions

The following sections describe the existing flora and fauna in the project area and immediate vicinity and are based on a survey completed in 2022. The survey results are presented in Appendix C. There were no endangered or threatened species encountered during the survey, and there are no federally listed critical habitats in the project area. According to DOFAW, endangered or threatened aquatic species or avifauna (such as the Hawaiian hoary bat and seabirds) may occur in Hanalei River or overfly the Project Site. In addition to listed species, the Hawaiian Short-Eared Owl (*Pueo*) may potentially nest in the area. The *Pueo* nests are on the ground, and they may nest year-round.

Based on the USFWS species list, fifteen (15) listed endangered or threatened species may occur within or near the Project Site. This includes one (1) mammal (Hawaiian hoary bat), eight (8) birds (Band-rumped Storm-petrel, Hawaiian Common Gallinule, Hawaiian Coot, Hawaiian Duck, Hawaiian Goose, Hawaiian Petrel, Hawaiian Stilt, and Newell's Shearwater), and four (4) plant species (*Canavalia napaliensis*, *Cyperus pennatifolius*, *Nothocestrum latifolium*, and *Santalum involutum*). HNWR provides habitat for these species, and a portion of the refuge is located within the Project Site.

The Project Site is not within an Essential Fish Habitat (EFH) defined under the Magnuson-Stevens Fishery Conservation and Management Act, and subsequent National Oceanic and Atmospheric Administration Essential Fish Habitat Regulatory Guidelines (2002). The project is not directly located in EFH, but is within approximately 0.9 miles of Hanalei Bay, which is designated as an EFH (including water column and all bottom areas) for coral reef ecosystem, bottom fish, pelagic fish, and a crustacean Management Unit Species (MUS). Of the thousands of species which are federally managed under the coral reef fishery management plans (FMP), at least 61 (juvenile and adult life stages) are known to occur in the waters of Hanalei Bay. Therefore, coordination with the National Marine Fisheries Service (NMFS) is not required, as the project is not expected to have any impact to EFH.

#### 3.7.1.1 Flora

During the survey, a total of 39 taxa of plants were recorded in the project area. Only three (8%) of the species are native plants: two indigenous and one likely indigenous. An additional species is an early Polynesian introduction ("canoe plant"), raising the category of "natives" more broadly defined to 10%, a value typical from surveys in lowland locations throughout the Hawaiian Islands. A detailed list is presented in Appendix C.

### 3.7.1.2 Fauna

The survey observed a damselfly and two dragonflies: the introduced Rambur's forktail damselfly (*Ischnura ramburii*); the scarlet skimmer (*Crocothemis servilia*); and indigenous wandering glider (*Pantala flavescens*). The larvae (*nymphs*) of these species are aquatic. Other than these insects and the call of a bullfrog (*Lithobates catesbeianus*), the only aquatic species observed during our survey was a school of fingerling redbelly tilapia (*Tilapia zilli*), an introduced cichlid.

A previous survey performed by AECOS in 2012 just downstream of the Project Site observed redbelly tilapia and blackchin tilapia (*Sarotherodon melanotheron*), as well as two native stream gobies ('o'opu nākea or *Awaous stamineus* and 'o'opu 'akupa or *Eleotris sandwicensis*), and two native estuarine fish ('ama'ama or *Mugil cephalus* and āholehole or *Kuhlia xenura*). It is also possible to have the endemic Hawaiian mountain shrimp ('ōpae kala'ole or *Atyoida bisulcata*) and the Hawaiian river prawn ('ōpae 'oeha'a or *Macrobrachum grandimanus*).

The DLNR Department of Aquatic Resources (DAR) reports almost all of Hawai'i's native amphidromous<sup>8</sup> animals occur in the freshwater reaches of Hanalei River indicating the project area is a migratory pathway to and from the ocean for native stream animals.

Although not observed during the survey, the native Hawaiian hoary bat may overfly the Project Site and vicinity. In addition, the hoary bat may roost on trees, typically taller than 15 feet. Other avifauna which may occur in Hanalei River or overfly the area are the following.

- Hawaiian Goose (*Branta sandvicensis*)
- Hawaiian Duck (*Anas wyvilliana*)
- Hawaiian Gallinule (*Gallinula galeata sandvicensis*)
- Hawaiian Coot (*Fulica alai*)
- Black-necked Stilt (*Himantopus mexicanus knudseni*)
- Hawaiian Hoary Bat (*Lasiurus cinereus semotus*)
- Hawaiian Petrel (*Pterodroma sandwichensis*)
- Newell's Shearwater (*Puffinus auricularis newelli*)
- Band-rumped Storm-petrel (*Hydrobates castro*)

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<sup>8</sup> Amphidromous – the fish move between fresh and saltwater as part of their life cycle.

### 3.7.2 Alternative Analysis

The Project Site is within the Hanalei National Wildlife Refuge, and the Preferred Alternative includes a property exchange. The property exchange will increase the HNWR acreage and the HDOT will own the portion of Hanalei River for the improvements. The property exchange shall have no adverse impacts on listed species or to the Refuge. Other than the avian fauna and the Hawaiian hoary bat, there are no listed species (endangered or threatened species) or critical habitats in the Project Site. The Preferred Alternative shall not have any impact on endangered or threatened species. In addition, the Preferred Alternative has resource BMPs for locating and reducing the disturbance of *Pueo* nest site and chicks. The Preferred Alternative will not destroy native habitat and protect the aquatic resources from increased turbidity with BMPs.

In addition, any habitat which is disrupted during construction will be replanted with similar and native plants. Native plants will be used for riverbank stabilization. The Preferred Alternative will follow the guidelines on the use and planting of invasive plant species, including but not limited to Ōhi'a Rust and the Coconut Rhinoceros Beetle (CRB). Therefore, the Preferred Alternative will have an insignificant impact on flora and fauna.

To further reduce the potential impact to avifauna, the following are included in the Preferred Alternative.

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site or nearby.
- If an endangered waterbird enters an active construction area, cease all construction activity. Work may resume after the individual leaves the area on its own volition.
- Avoid creating surface water features (puddles, etc.) after grading and grubbing. Surface water should be removed to avoid creating a nuisance attractant.
- A qualified biologist should conduct a preconstruction survey for endangered waterbird nests immediately prior to construction activity near water features. If a nest is found, contact USFWS immediately.
- Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
- From an avian resource's perspective, night-time construction should be avoided during the seabird fledging season that extends from September 15<sup>th</sup> through December 15<sup>th</sup> each year. This minimization will ensure that fledgling birds are not attracted to and disoriented by construction lights.

- Any exterior lighting related to the Preferred Alternative should be dark sky complaint and shielded with DLNR Division of Forestry and Aquatic Resources guidelines for seabirds.
  - Install automatic motion sensors switches and controls on all outdoor lighting or turn off lights when human activity is not occurring in the lighted area.
- There may be a potential impact on the Hawaiian hoary bat if trees (greater than 15 feet tall) are being felled. The disturbance associated with removal of any particular tree would be insignificant. However, an exception occurs during the bat pupping season, when a female bat carrying a pup may be unable to rapidly vacate a roost tree that is being felled; or an unattended pup is unable to flee a tree that is being felled.
- To avoid any potential adverse impacts from woody vegetation taller than 4.6 m (15 ft), tall woody vegetation should be performed before June 1 and after September 15<sup>th</sup>. The period in which bats may have pups is between June 1 and September 15<sup>th</sup>.
- The Preferred Alternative shall not use barbed wire fencing.

To further reduce the impact on aquatic species, the following measures are recommended to minimize or avoid impacts to fishes from underwater sound emissions. The implementation of these measures and the distance of the Project Site upriver from Hanalei Bay, the sound energy generated by pile driving is not anticipated to be sufficient to result in adverse effects to MUS or EFH within or near the project area. Fish that occur in the project area are expected to actively avoid impacts from the Project activities.

- The implementation of “soft starts” (use of a low energy start) would minimize potential impacts to fish species in general, since they would likely leave the area as drilling/driving commences.
- Conduct underwater acoustic monitoring to gather site-specific sound (dB) data on ambient levels in the area, as well as noise generated from sheet pile installation.

The remote staging area is devoid of any vegetation and has been used as a driveway or construction staging area in the past. Therefore, there shall be no impact to flora or fauna with the Preferred Alternative at the staging area site. Construction BMPs are included in the Preferred Alternative for erosion control, and the natural resources BMPs also apply to the staging area, if applicable.

The No-Action Alternative will not have significant impact on flora and fauna. The No-Action Alternative will not disrupt flora and fauna and the habitat.



## 3.8 Wetlands

### 3.8.1 Existing Conditions

The jurisdictional waters, or waters of the U.S., are surface waters such as tributaries and wetlands. The Hanalei River is a tributary and therefore, the “ordinary high-water mark (OHWM),” was marked to indicate the jurisdiction of the Federal agencies and shown on Figure 9.

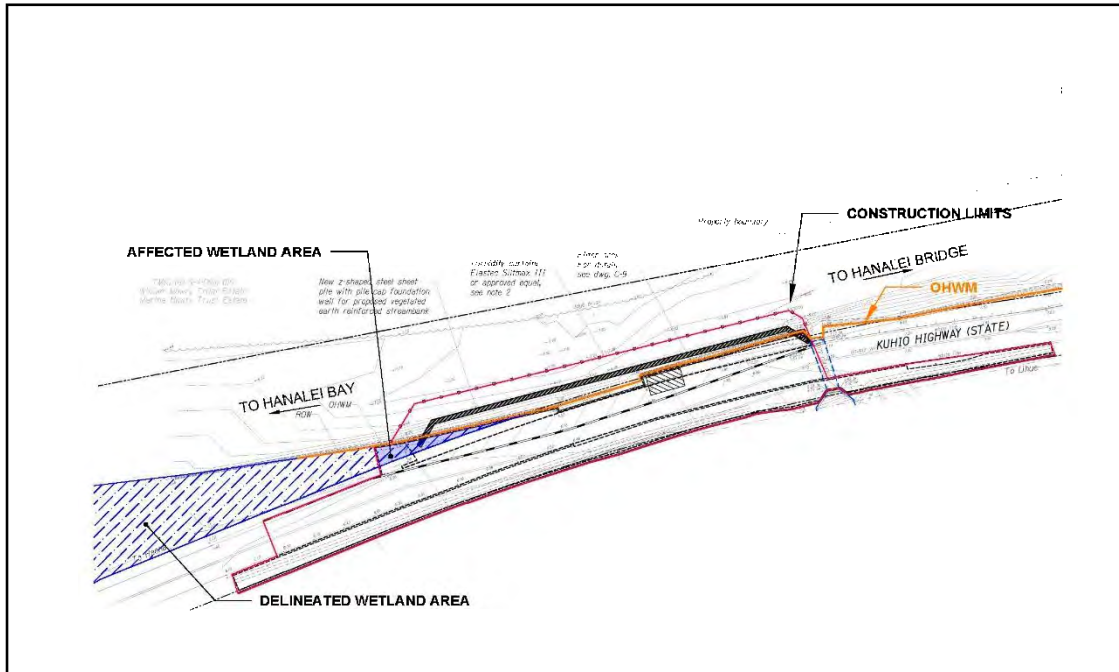
A jurisdictional waters and wetland survey was completed in 2022, and a small wetland was discovered in the roadway shoulder and delineated as shown in Figure 9. This wetland extends beyond the project area and has a total delineated area of approximately 0.5 acres (20,500 sq. ft.). The total wetland area within the Project Site is approximately 0.02 acres (632 sq. ft), or about 3 percent (3%) of the total delineated area. The overall extent of the wetland is undetermined and not delineated as it extends well beyond the Project Site. The results of the survey are presented in Appendix C.

In addition, the Hanalei River is designated as an American Heritage River. The American Heritage River program recognizes the communities work in restoring the rivers and provides assistance to river communities to access Federal programs to protect natural resources, undertake economic revitalization, and preserve local culture.

### 3.8.2 Alternative Analysis

The Preferred Alternative and the No-Action Alternative will not impact on the OHWM. The Preferred Alternative main construction area will encompass a small portion of a wetland in the roadway shoulder. This wetland area will be protected from impact during construction with a temporary fence. The project complies with Section 404 permit conditions. Therefore, there shall be no significant impact on the wetland. There shall be no impact to the American Heritage River program.

The No-Action Alternative will allow erosion to continue and overtime the wetland will be eroded away and become non-existent.



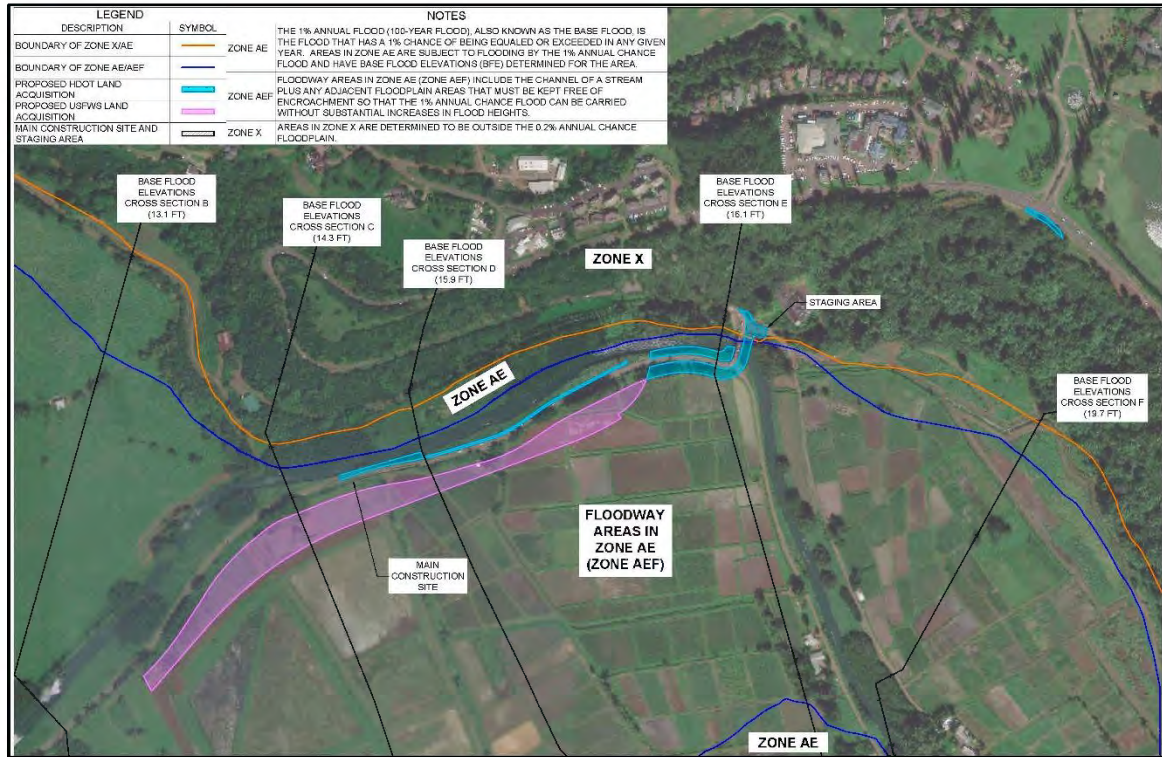
**Figure 9. WETLAND AND ORDINARY HIGH-WATER MARK (OHWM)**

### 3.9 Floodplains

#### 3.9.1 Existing Conditions

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map the project area is within the AEF flood zone with a Base Flood Elevation (BFE) between 13 to 19.7 feet above Mean Sea Level (MSL). The AEF designator means that the area is within the floodway and the BFE has been determined. The floodplain and BFE are shown on Figure 10.

The main construction area is within AEF zone and has BFE from 14.3 feet to 15.9 feet. The staging area is in Zone X and the BFE has not been determined. The acquired area at the Ka Haku Road and Kuhio Highway intersection is out to the flood area and in an area where the BFE has not been determined. This property is on the top of the valley ridge and not on the Hanalei valley floor.



**Figure 10. FLOOD RISK FROM FLOOD INSURANCE RATE MAP (FIRM)**

### 3.9.2 Alternative Analysis

The Preferred Alternative and the No-Action Alternative will not change the flooding in the area and therefore shall have no impact on the floodway, floodplain, and flooding in the area. The Preferred Alternative has a No-Rise Certification accepted by the County of Kauai on November 27, 2024.

## 3.10 Hazardous Materials, Pollution Prevention, and Solid Waste

### 3.10.1 Existing Conditions

The area is in an undeveloped and agricultural area of Hanalei Valley, with the only modern development being Kuhio Highway. There are no historical or existing uses that indicate any hazardous materials or solid waste. The river does have sediment from the upper valley that may include animal waste and associated pathogens, agricultural and residential runoff, especially during rainfall periods. The current erosion of the site has undermined the Kuhio Highway shoulder and causing sediment to enter Hanalei River.

### 3.10.2 Alternative Analysis

The Preferred Alternative shall not have any significant impact relating to hazardous materials and solid waste. During construction, there will be construction activities and construction equipment which have the potential to deposit small amounts of compounds or increase the potential of runoff and sediment into the river. Debris from construction activities can also attract invasive species such as the Coconut Rhinoceros Beetle (CRB), which inhabits waste piles and Ōhi‘a Rust. Therefore, the Preferred Alternative shall follow the invasive species rules and regulations for invasive species.

Therefore, during construction BMPs shall be incorporated into the design and implemented during construction to prevent contamination by hazardous compounds, pollution and solid waste disposal, and sediment runoff into the river. The construction area will be revegetated or paved to prevent long term sediment runoff from the project area into the river.

Under the No-Action Alternative, the continuing erosion of the riverbank shall continue to release sediments into the river. The characteristics and volume of the sediments will be determined by the soil type along the riverbank and the velocity of the river waters.

## 3.11 Socio-Economic Impacts

### 3.11.1 Existing Conditions

According to the U.S. Census<sup>9</sup>, the Hanalei Census Designated Places (CDP) has a land area of 0.7 square miles and encompasses Hanalei Town only. It is the closest CDP to the project area and has a total population of 444 people with a median age of 65.3 years. The median household income is \$114,375 and has an employment rate of 26 percent (26%). There are 259 housing units with 101 total households.

The top three (3) labor categories are construction (27.8%), educational services (25.9%), and finance and insurance (11.1%). There is an agricultural industry in Hanalei Valley, but zero percent (0%) of the workers are from the Hanalei CDP, thus the agricultural workers live outside of Hanalei CDP.

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<sup>9</sup> [Hanalei CDP, Hawai'i Census Bureau Profile](#) December 19, 2024.

### 3.11.2 Alternative Analysis

The Preferred Alternative will have no impact on socio-economic factors, as it will maintain the roadway link between Hanalei and the rest of Kauaʻi. During construction there will be temporary lane closures, but these temporary lane closures shall have no impact on socio-economic factors.

The No-Action Alternative will allow riverbank erosion to continue, and over time destroy the roadway link between Hanalei and the rest of Kauaʻi. Over a long period, this will have a significant impact on socio-economic factors.

## 3.12 Traffic and Circulation

### 3.12.1 Existing Conditions

The Project Site will realign the current Kuhio Highway which is the only roadway in the area and is a critical link between Hanalei and the rest of Kauaʻi. The roadway is a two-lane paved road with grassed shoulders. The project areas also include guardrail(s) between the roadway and the river, which has also been affected by the riverbank erosion. The closest intersection would be the Ohiki Road and Kuhio Highway intersection, which is approximately 0.4 miles east of the project area.

### 3.12.2 Alternative Analysis

The Preferred Alternative will maintain the critical link between Hanalei and Kauaʻi. The Preferred Alternative shall construct a new realigned two-lane roadway, grassed shoulders and guardrail configuration. Therefore, there shall be no significant impact on traffic volumes, congestion and circulation.

The No-Action Alternative will allow the riverbank to erode, and over time, will increasingly impact the roadway structure. At some point in the future, the roadway link will become unusable, and the critical link between Hanalei and Kauaʻi, will be terminated. At that point in time, the No-Action Alternative will have a significant impact on traffic and circulation.

**Construction Impacts.** During construction, there will be temporary disruptions of traffic and circulation due to the activities at the Project Site. The design will incorporate appropriate traffic management and safety protocols to ensure the safety of the workers and the traveling public. As these impacts are temporary and short-term, there will be no significant impact to traffic and circulation during construction.

### **3.13 Utilities**

#### **3.13.1 Existing Conditions**

There are overhead electrical and communication lines transverse the Project Site. There are no other utilities in the area.

#### **3.13.2 Alternative Analysis**

The Preferred Alternative shall have no impact on utilities. There is one utility pole in the project area, which will be protected during construction.

The No-Action Alternative shall allow the riverbank erosion to continue and may overtime undermine the utility poles. When this occurs, the utilities will need to be relocated to continue to provide service to Hanalei Valley.

### **3.14 Police and Fire Services and Public Safety**

#### **3.14.1 Existing Conditions**

The fire, hazardous material response and medical response is performed by the County of Kaua'i Fire Department Fire Station 1 in Hanalei and Fire Station 2 in Kapa'a. Their operations include fire protection and suppression, ocean and land rescues, hazardous material, and emergency medical services (basic life support).

The police services are provided by the County of Kaua'i Police Department and actively patrols the area. The closest police station is located in Princeville.

The County of Kaua'i Emergency Management Agency coordinates efforts to mitigate impacts due to natural disasters, acts of terrorism, and other threats and hazards. Their main office is in Līhu'e.

#### **3.14.2 Alternative Analysis**

The Preferred Alternative shall not have any impact on police, fire, and public safety services. The Preferred Alternative will not increase the need for these services. Police fire, and other emergency services will be notified of the construction. During construction, police, fire and other emergency vehicles will be accommodated to ensure access to and from Hanalei Valley. These provisions shall be included in the plans and construction notes.



The No-Action Alternative will allow the riverbank to erode, eventually undermining the roadway. This will cut off the surface link to the rest of Kauaʻi, and significantly impact police, fire, and public safety response due to the lack of a roadway.

### **3.15 Health Care Facilities**

#### **3.15.1 Existing Conditions**

The closest urgent care facility is in Princeville, and the closest hospital is the Samuel Mahelona Memorial Hospital, which is a Critical Access Hospital. The Hospital provides acute care, emergency care, inpatient, and outpatient services.

#### **3.15.2 Alternative Analysis**

The Preferred Alternative shall not have any impact on Health Care Facilities.

The No-Action Alternative, over a long period of time, will sever the link between Hanalei and these health care facilities and will be a significant impact.

### **3.16 Schools**

#### **3.16.1 Existing Conditions**

Hanalei Elementary School is located in Hanalei and is a public school serving children from pre-kindergarten to sixth grade. The closest middle school is Kapaʻa Middle School, and the closest public high school is Kapaʻa High School. The closest public library is in Princeville.

#### **3.16.2 Alternative Analysis**

The Preferred Alternative will have no impact to the schools and library in the area and access to the schools and the library.

Over time, the No-Action Alternative will terminate the link between Hanalei and Kapaʻa Middle and High Schools, and that would be a significant impact.

### 3.17 Visual Resources and Light Emissions

#### 3.17.1 Existing Conditions

Hanalei maintains the rural agricultural lifestyle that is preserved with the *Kuhio Highway (Route 560) Historic Road Corridor Plan*. Those traveling along Route 560 drop into the valley and pass over the historic Hanalei Bridge, see the agriculture and natural beauty of Hanalei Valley. There are no established visual corridors, but the existing roadway shoulders are fairly level with grass and other vegetation. The tall grass blocks the view of the Hanalei River, but the Valley walls are visible.

#### 3.17.2 Alternative Analysis

The Preferred Alternative will maintain the grassed and fairly level shoulder along the roadway pavement, with a metal guardrail to protect vehicles from entering the Hanalei River. The grass will be replanted, and native plants will be used along the riverbank to restore the natural landscape. The reconstructed riverbank will not protrude above the shoulder and will not be visible from vehicles traveling on the roadway and will not impair the views of the Valley walls. The users of Hanalei River may notice the reconstructed riverbank, which will have native plantings and boulder facia on the pile cap to minimize visual disruption.

There will be no new permanent lighting installed as part of the Preferred Alternative. There may be temporary lighting used during construction. All lighting will follow the DNLR's dark skies and light emission guidelines to prevent disorientation or attraction of seabirds. These measures will minimize light pollution and avoid adverse effects on the area. Therefore, the Preferred Alternative shall have no significant impact on visual resources or light emissions.

The No-Action Alternative will have no impact on visual resources and light emissions.

### 3.18 Recreational Facilities

#### 3.18.1 Existing Conditions

Hanalei River is within the project area and is used for recreation, mainly, fishing and kayaking by residents and visitors to the area. The Hanalei River is considered a perennial stream that starts at about the 5,130-foot elevation at the back of Hanalei Valley and drains the northeastern slope of Mount Waialeale. The river area within the Project Site is within the lower reaches of the River and is considered to be an estuary as it flows through the Hanalei Valley floor.

The portion of the River in the Project Site passes through the HNWR. The river provides a quiet kayak experience with potential observation of wildlife, especially avifauna. There are no other recreational areas near the project area.

Since its designation as an American Heritage River, numerous studies have been conducted in the river and in Hanalei Bay, many summarized in the proceedings of a 2007 workshop. Included in the studies are reports on water quality, sediment loading, coral reef communities, riparian vegetation, and other scientific and management aspects of the watershed.

### **3.18.2 Alternative Analysis**

The Preferred Alternative will encroach into the river to stabilize the riverbank, and negotiations are underway with the U.S. Department of Interior to complete the property exchange. The impact area will be within the old (pre-erosion) riverbank alignment. The project shall have no significant impact on recreational use of the river. As recommended in the CIA, HDOT HWY will work with the community to find solutions if the Proposed Action disrupts the use of the Hanalei River.

The No-Action Alternative shall have no impact on the recreational use of the river.

## **3.19 Growth-Inducing and Cumulative Impacts**

### **3.19.1 Growth-Inducing Impacts**

The Hanalei community has dealt with the issue of growth or growth inducing concepts for a very long time. The discussion or issues related to growth, whether it be increased local population, tourism, economics, business, etc. will continue to exist in the future.

The Preferred Alternative does not increase the capacity of the roadway and maintains the current capacity and safety of the roadway. Therefore, the Preferred Alternative has no impact on growth or growth inducing factors for Hanalei or Kaua‘i.

The No-Action Alternative will have no growth inducing impacts.

### **3.19.2 Cumulative Impacts**

HRS 343 requires the analysis of cumulative impacts that result from the incremental impact of the Proposed Action when added to past (last five [5] years), present, and reasonably foreseeable future actions (next five [5] years) in the Proposed Action’s vicinity, regardless of which agency or person is undertaking the project.

There are no other development projects (past, present or future) in the immediate vicinity of the project, and HDOT has no other long-term plans for the roadway. However, an emergency repair project was implemented in 2022 in response to erosion and riverbank instability at Hanalei Bridge. This project involved short-term construction with no significant impacts.

The Preferred Alternative will stabilize the riverbank and protect the highway from further erosion, helping maintain its function, improve safety conditions, preserve cultural and historic resources, and protect the water quality. Temporary noise, traffic, soil, air quality, and water quality impacts associated with construction activities are expected to be insignificant and managed through BMPs, which are integrated into the project design. No permanent lighting is proposed along the road, and no impacts to endangered or threatened species are anticipated. The Preferred Alternative does not involve expansion that would increase the capacity of the highway or a change of use. Therefore, there are no cumulative impacts related to the Preferred Alternative.

### **3.20 Relationship to Governmental Plans, Policies, and Controls**

As discussed below, the Proposed Action is generally consistent with the applicable parts of the (i) *Hawai‘i State Plan*; (ii) *Coastal Management Plan*, (iii) *Kaua‘i General Plan*; and (iii) *Kuhio Highway (Route 560) Historic Roadway Corridor Plan* goals, policies, and standards relating to future growth in the harbor area. The Proposed Action will maintain a critical link between Hanalei and the rest of Kaua‘i. Each item is followed by a statement describing the effect of the Proposed Action.

#### **3.20.1 Hawai‘i State Plan**

*The Hawai‘i State Plan* (Chapter 226, Hawai‘i Revised Statutes) represents a process which integrates the plans, policies, and projects of all State agencies. Table 3 provides a brief discussion on the impact of the Proposed Action on the Hawai‘i State Plan.

**TABLE 4**  
**HAWAI'I STATE PLAN**  
**(HRS Chapter 226)**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
<b>Section 226-4: State Goals</b>  In order to ensure, for present and future generations, those elements of choice and mobility that ensure 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:			
(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	X		
(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	X		
(3) Physical, social, and economic well-being, for the individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life	X		
Discussion: The Proposed Action supports these objectives and policies by maintaining an efficient and safe transportation infrastructure for the Hanalei and Kaua'i communities.			
<b>Section 226-5: Objective and policies for population</b>  (A) 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.  (B) To achieve the population objective, it shall be the policy of this State to:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.	X		
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.	X		
(3) Promote increased opportunities for Hawai'i's people to pursue their socioeconomic aspirations throughout the islands.	X		
(4) Encourage research activities and public awareness programs to foster an understanding of Hawai'i's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawai'i's population.			X
(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.			X
(6) Pursue an increase in Federal assistance for States with a greater proportion of foreign immigrants relative to their State's population.			X
(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.			X
Discussion: The objective is generally not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
<b>226-6: Objectives and policies for the economy in general.</b>			
(A) Planning for the State's economy in general shall be directed toward the 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 Hawai'i'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.	X		
(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.	X		
(B) To achieve the general economic objectives, it shall be the policy of this State to:			
(1) Promote and encourage entrepreneurship within Hawai'i by residents and nonresidents of the State.			X
(2) Expand Hawai'i'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.			X
(3) Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawai'i's people.			X
(4) Transform and maintain Hawai'i as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.	X		
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawai'i.			X
(6) Seek broader outlets for new or expanded Hawai'i business investments.			X
(7) Expand existing markets and penetrate new markets for Hawai'i's products and services.	X		
(8) Assure that the basic economic needs of Hawai'i's people are maintained in the event of disruptions in overseas transportation.	X		
(9) Strive to achieve a level of construction activity responsive to, and consistent with, State growth objectives.	X		
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawai'i's small-scale producers, manufacturers, and distributors.	X		
(11) Encourage labor-intensive activities that are economically satisfying, and which offer opportunities for upward mobility.	X		
(12) Encourage innovative activities that may not be labor-intensive but may otherwise contribute to the economy of Hawai'i.	X		
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawai'i's employment and economic growth opportunities.	X		
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			X
(15) Maintain acceptable working conditions and standards for Hawai'i's workers.	X		
(16) Provide equal employment opportunities for all segments of Hawai'i's population through affirmative action and nondiscrimination measures.	X		
(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.	X		
(18) Encourage businesses that have favorable financial multiplier effects within Hawai'i's economy.	X		
(19) Promote and protect intangible resources in Hawai'i, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	X		



**TABLE 4 (continued)**  
**HAWAII STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(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.			X
(21) Foster a business climate in Hawai'i — 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.	X		
Discussion: The Proposed Action contributes to this goal by providing the surface transportation infrastructure for the movement of goods and people. A safe and efficient transportation system supports these goals.			
<b>226-7: Objectives and policies for the economy — agriculture.</b>			
(A) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:			
(1) Viability of Hawai'i's sugar and pineapple industries.			X
(2) Growth and development of diversified agriculture throughout the State.	X		
(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawai'i's strategic, economic, and social well-being.	X		
(B) To achieve the agriculture objectives, it shall be the policy of this State to:			
(1) Establish a clear direction for Hawai'i's agriculture through stakeholder commitment and advocacy.			X
(2) Encourage agriculture by making the best use of natural resources.			X
(3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.			X
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			X
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.			X
(6) Seek the enactment and retention of Federal and State legislation that benefits Hawai'i's agricultural industries.			X
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai'i's food producers and consumers in the State, nation, and world.	X		
(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.			X
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			X
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			X
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			X
(12) Expand Hawai'i'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.	X		
(13) Promote economically competitive activities that increase Hawai'i's agricultural self-sufficiency, including the increased purchase and use of Hawai'i-grown food and food products by residents, businesses, and governmental bodies, as defined under section 103D-104.	X		
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			X
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(16) Facilitate the transition of agricultural lands in economically non-feasible agricultural production to economically viable agricultural uses.			X
(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.			X
(18) Increase and develop small-scale farms.	X		
Discussion: Maintaining the roadway link between the Hanalei agricultural areas to the rest of Kaua'i and the State is critical for those farms which export their commodities beyond the Hanalei community. The efficient transporting of the agricultural commodities minimizes, to the extent possible, the agricultural producers' cost of doing business.			
<b>226-8: Objective and policies for the economy — visitor industry.</b>			
(A) 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 Hawai'i's economy.			
(B) To achieve the visitor industry objective, it shall be the policy of this State to:			
(1) Support and assist in the promotion of Hawai'i's visitor attractions and facilities.	X		
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people.			X
(3) Improve the quality of existing visitor destination areas by utilizing Hawai'i's strengths in science and technology.			X
(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.			X
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawai'i's people.	X		
(6) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the visitor industry.	X		
(7) Foster a recognition of the contribution of the visitor industry to Hawai'i's economy and the need to perpetuate the aloha spirit.			X
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawai'i's cultures and values.			X
Discussion: The project maintains the roadway to allow the transiting of visitors and industry employees between Hanalei and Kaua'i.			
<b>226-9: Objective and policies for the economy — Federal expenditures.</b>			
(A) 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 Hawai'i's economy.			
(B) To achieve the Federal expenditures objective, it shall be the policy of this State to:			
(1) Encourage the sustained flow of Federal expenditures in Hawai'i that generates long-term government civilian employment.			X
(2) Promote Hawai'i's supportive role in national defense, in a manner consistent with Hawai'i'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 Hawai'i's economy.			X
(3) Promote the development of federally supported activities in Hawai'i that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawai'i's environment.	X		
(4) Increase opportunities for entry and advancement of Hawai'i's people into Federal government service.			X
(5) Promote Federal use of local commodities, services, and facilities available in Hawai'i.			X
(6) Strengthen Federal-State-county communication and coordination in all Federal activities that affect Hawai'i.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(7) Pursue the return of Federally controlled lands in Hawai'i 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.			X
Discussion: The project will maintain the roadway for link Hanalei to Kaua'i. The project will be using Federal lands which will be exchanged with State of Hawai'i lands.			
<b>226-10: Objective and policies for the economy — potential growth and innovative activities.</b> (A) 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 Hawai'i's economic base.  (B) To achieve the potential growth and innovative activity objective, it shall be the policy of this State to:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawai'i's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.	X		
(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 Hawai'i through the export of services or products or substitution of imported services or products.			X
(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.			X
(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.			X
(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.			X
(6) Expand Hawai'i's capacity to attract and service international programs and activities that generate employment for Hawai'i's people.			X
(7) Enhance and promote Hawai'i's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.			X
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, and underground resources and solid waste.			X
(9) Promote Hawai'i's geographic, environmental, social, and technological advantages to attract new economic activities into the State.			X
(10) Provide public incentives and encourage private initiative to attract new industries that best support Hawai'i's social, economic, physical, and environmental objectives.			X
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.			X
(12) Develop, promote, and support research and educational and training programs that will enhance Hawai'i's ability to attract and develop economic activities of benefit to Hawai'i.			X
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawai'i.			X
(14) Encourage the development and implementation of joint Federal and State initiatives to attract Federal programs and projects that will support Hawai'i's social, economic, physical, and environmental objectives.			X
(15) Increase research and development of businesses and services in the telecommunications and information industries.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(16) Foster the research and development of non-fossil fuel and energy-efficient modes of transportation.			X
(17) Recognize and promote health care and health care information technology as growth industries.			X
Discussion: The Proposed Action contributes to this goal by providing an efficient and safe surface vehicle transportation link between Hanalei and Kaua'i that the residents, visitors and economy.			
<b>226-10.5: Objectives and policies for the economy — information industry.</b>			
(A) Planning for the State's economy with regard to the information industry shall be directed toward the achievement of the objective of positioning Hawai'i as the leading dealer in information businesses and services in the Pacific Region.			
(B) To achieve the information industry objective, it shall be the policy of this State to:			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawai'i and between Hawai'i and the world, and make high-speed communication available to all residents and businesses in Hawai'i.			X
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawai'i to accommodate future growth in the information industry.			X
(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 Hawai'i.			X
(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 Hawai'i, using technology to communicate with their headquarters, offices, or customers located out-of-state.			X
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry.			X
(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 Hawai'i's people.			X
(7) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the information industry.			X
(8) Foster a recognition of the contribution of the information industry to Hawai'i's economy.			X
(9) Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific.			X
Discussion: An efficient and safe transportation system supports this goal in general.			
<b>226-11: Objectives and policies for the physical environment — land-based, shoreline, and marine resources.</b>			
(A) 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 Hawai'i's land-based, shoreline, and marine resources.	X		
(2) Effective protection of Hawai'i's unique and fragile environmental resources.	X		
(B) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
(1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.	X		
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.	X		
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	X		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	X		

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			X
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.	X		
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			X
(8) Pursue compatible relationships among activities, facilities, and natural resources.	X		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.	X		
Discussion: The Proposed Action will not degrade the physical environment, while maintaining the transportation infrastructure.			
<b>226-12: Objective and policies for the physical environment — scenic, natural beauty, and historic resources.</b>  (A) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multicultural/historical resources.  (B) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:			
(1) Promote the preservation and restoration of significant natural and historic resources.	X		
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	X		
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	X		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.	X		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	X		
Discussion: The Proposed Action will restore the riverbank with native plants which will provide a "greenscape" to minimize the visual impact of the project. In addition, the structure will not extend above the existing elevation of the shoulder, to provide an unobstructed view from the roadway.			
<b>226-13: Objectives and policies for the physical environment — land, air, and water quality.</b>  (A) 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 Hawai'i's land, air, and water resources.	X		
(2) Greater public awareness and appreciation of Hawai'i's environmental resources.			X
(B) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			
(1) Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.			X
(2) Promote the proper management of Hawai'i's land and water resources.	X		
(3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.	X		
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.	X		
(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.			X
(6) Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.			X
(7) Encourage urban developments in close proximity to existing services and facilities.	X		

**TABLE 4 (continued)**  
**HAWAII STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures, and visitors.			X
Discussion: The Proposed Action supports the State's objectives and policy by implementing Best Management Practices and mitigation and abatement measures to protect the environment.			
<b>226-14: Objective and policies for facility systems in general.</b>			
(A) 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.			
(B) To achieve the general facility systems objective, it shall be the policy of this State to:			
(1) Accommodate the needs of Hawai'i's people through coordination of facility systems and capital improvement priorities in consonance with State and county plans.	X		
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.	X		
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.	X		
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.	X		
Discussion: The Proposed Action will maintain the surface transportation link between Hanalei and Kaua'i, and will maintain the system's capacity for vehicle movement.			
<b>226-15: Objectives and policies for facility systems — solid and liquid wastes.</b>			
(A) 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.			X
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			X
(B) To achieve solid and liquid waste objectives, it shall be the policy of this State to:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			X
(2) Promote reuse and recycling to reduce solid and liquid wastes and employ a conservation ethic.			X
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			X
Discussion: The Proposed Action will not impact waste disposal or increase waste. During construction there will be waste generated on the site, and the waste will be properly disposed. The use of BMP will protect the surrounding environment from construction activities.			
<b>226-16: Objective and policies for facility systems — water.</b>			
(A) 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.			
(B) To achieve the facility systems water objective, it shall be the policy of this State to:			
(1) Coordinate development of land use activities with existing and potential water supply.			X
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			X
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			X
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			X
(5) Support water supply services to areas experiencing critical water problems.			X



**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(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.			X
Discussion: The Proposed Action is not expected to have any impact on water resources, water demand or water infrastructure.			
<b>226-17: Objectives and policies for facility systems — transportation.</b>			
(A) 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.	X		
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.	X		
(B) To achieve the transportation objectives, it shall be the policy of this State to:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter.	X		
(2) Coordinate State, county, Federal, and private transportation activities and programs toward the achievement of statewide objectives.	X		
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties.	X		
(4) Provide for improved accessibility to shipping, docking, and storage facilities.	X		
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs.	X		
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities.	X		
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods.	X		
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs.	X		
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification.	X		
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawai'i's natural environment.	X		
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation.	X		
(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.	X		
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.	X		
Discussion: The Proposed Action contributes to this goal by providing a surface link for Hanalei and Kaua'i.			
<b>226-18: Objectives and policies for facility systems — energy.</b>			
(A) 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.			X
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawai'i's dependence on imported fuels for electrical generation and ground transportation.			X
(3) Greater diversification of energy generation in the face of threats to Hawai'i's energy supplies and systems.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.			X
(5) Utility models that make the social and financial interests of Hawai'i's utility customers a priority.			X
(B) To achieve the energy objectives, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand.			
(C) To further achieve the energy objectives, it shall be the policy of this State to:			
(1) Support research and development as well as promote the use of renewable energy sources.			X
(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth.			X
(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.			X
(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. (D) Increasing energy efficiency and decreasing energy use in public infrastructure.			X
(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.			X
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies.			X
(7) Promote alternate fuels and energy efficiency.			X
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications.			X
(9) Support actions that reduce, avoid, or sequester Hawai'i's greenhouse gas emissions through agriculture and forestry initiatives.			X
(10) Provide priority handling and processing for all State and county permits required for renewable energy projects.			X
(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.			X
(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 Hawai'i.			X
Discussion: The objective is not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
<b>226-18.5: Objectives and policies for facility systems — telecommunications.</b> (A) 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.  (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.  (C) To further achieve the telecommunications objective, it shall be the policy of this State to:			
(1) Facilitate research and development of telecommunications systems and resources.			X
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning.			X
(3) Promote efficient management and use of existing telecommunications systems and services.			X
(4) Facilitate the development of education and training of telecommunications personnel.			X
Discussion: The objective is not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-19: Objectives and policies for sociocultural advancement — housing.</b> (A) 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 Hawai'i'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 rental and for sale affordable housing is made available to extremely low-, very low-, lower-, moderate-, and above moderate-income segments of Hawai'i's population.			X
(2) The orderly development of residential areas sensitive to community needs and other land uses.			X
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawai'i's people.			X
(B) To achieve the housing objectives, it shall be the policy of this State to:			
(1) Effectively accommodate the housing needs of Hawai'i's people.			X
(2) Stimulate and promote feasible approaches that increase affordable rental and for sale housing choices for extremely low-, very low-, lower-, moderate-, and above moderate-income households.			X
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			X
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			X
(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.			X
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			X
(7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the culture and values of the community.			X
(8) Promote research and development of methods to reduce the cost of housing construction in Hawai'i.			X
Discussion: The objective is not applicable however the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
<b>226-20: Objectives and policies for sociocultural advancement — health.</b>			
(A) Planning for the State's sociocultural 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.	X		
(2) Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities.			X
(3) Elimination of health disparities by identifying and addressing social determinants of health.			X
(B) To achieve the health objectives, it shall be the policy of this State to:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.	X		
(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.	X		
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			X
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			X
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			X
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.	X		
(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.			X
Discussion: The Proposed Action supports these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community and access to other healthcare alternatives.			
<b>226-21: Objective and policies for sociocultural advancement — education.</b>			
(A) Planning for the State's sociocultural 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.			
(B) To achieve the education objective, it shall be the policy of this State to:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.			X
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.	X		
(3) Provide appropriate educational opportunities for groups with special needs.	X		
(4) Promote educational programs which enhance understanding of Hawai'i's cultural heritage.			X
(5) Provide higher educational opportunities that enable Hawai'i's people to adapt to changing employment demands.			X
(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.	X		
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(8) Emphasize quality educational programs in Hawai'i's institutions to promote academic excellence.			X
(9) Support research programs and activities that enhance the education programs of the State.			X
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to access educational and labor opportunities.			
<b>226-22: Objective and policies for sociocultural advancement — social services.</b>			
(A) Planning for the State's sociocultural 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.			
(B) To achieve the social service objective, it shall be the policy of the State to:			
(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.			X
(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.			X
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawai'i's communities.			X
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			X
(5) Support public and private efforts to prevent domestic abuse and child molestation and assist victims of abuse and neglect.			X
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			X
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-23: Objective and policies for socio-cultural advancement — leisure.</b>			
(A) Planning for the State's sociocultural 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.			
(B) To achieve the leisure objective, it shall be the policy of this State to:			
(1) Foster and preserve Hawai'i's multicultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			X
(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.			X
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			X
(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.			X
(5) Ensure opportunities for everyone to use and enjoy Hawai'i's recreational resources.			X
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.			X
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawai'i's people.			X
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			X
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawai'i's population to participate in the creative arts.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(10) Assure adequate access to significant natural and cultural resources in public ownership.			X
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-24: Objective and policies for sociocultural advancement — individual rights and personal well-being.</b>			
(A) Planning for the State's sociocultural 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 socioeconomic needs and aspirations.			
(B) To achieve the individual rights and personal well-being objective, it shall be the policy of this State to:			
(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.			X
(2) Uphold and protect the national and State constitutional rights of every individual.	X		
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X
(4) Ensure equal opportunities for individual participation in society.	X		
Discussion: The objective is generally not applicable, but the Proposed Action will support these objectives and policies by maintaining a efficient and safe transportation infrastructure.			
<b>226-25: Objective and policies for sociocultural advancement — culture.</b>			
(A) Planning for the State's sociocultural 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 Hawai'i's people.			
(B) To achieve the culture objective, it shall be the policy of this State to:			
(1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i.			X
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people and which are sensitive and responsive to family and community needs.			X
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawai'i.			X
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawai'i's people and visitors.			X
Discussion: The objective is not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-26: Objectives and policies for sociocultural advancement — public safety.</b>			
(A) Planning for the State's sociocultural 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.	X		
(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.	X		
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's people.			X
(B) To achieve the public safety objectives, it shall be the policy of this State to:			
(1) Ensure that public safety programs are effective and responsive to community needs.			X



**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(2) Encourage increased community awareness and participation in public safety programs.			X
(C) To further achieve public safety objectives related to criminal justice, it shall be the policy of this State to:			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			X
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			X
(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.			X
(D) To further achieve public safety objectives related to emergency management, it shall be the policy of this State to:			
(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.	X		
(2) Enhance the coordination between emergency management programs throughout the State.	X		
Discussion: The Proposed Action will support these objectives by maintaining an efficient and safe surface transportation infrastructure. The transportation infrastructure will allow access by public safety staff and equipment to the community.			
<b>226-27: Objectives and policies for sociocultural advancement — government.</b>			
(A) Planning the State's sociocultural 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.	X		
(2) Fiscal integrity, responsibility, and efficiency in the State government and county governments.	X		
(B) To achieve the government objectives, it shall be the policy of this State to:			
(1) Provide for necessary public goods and services not assumed by the private sector.	X		
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.	X		
(3) Minimize the size of government to that necessary to be effective.			X
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawai'i.			X
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.	X		
(6) Provide for a balanced fiscal budget.			X
(7) Improve the fiscal budgeting and management system of the State.			X
(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.			X
Discussion: The objective is generally not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
<b>226-101: Purpose</b> The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
<b>226-102: Overall direction</b> The State shall strive to improve the quality of life for Hawai'i'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, and quality education.			
<b>226-103: Economic priority guidelines.</b> (A) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawai'i'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.			X
(a) Encourage investments which:			X
(i) Reflect long-term commitments to the State.			X
(ii) Rely on economic linkages within the local economy.			X
(iii) Diversify the economy.			X
(iv) Reinvest in the local economy.			X
(v) Are sensitive to community needs and priorities.			X
(vi) Demonstrate a commitment to provide management opportunities to Hawai'i residents.			X
(b) Encourage investments in innovative activities that have a nexus to the State, such as:			X
(i) Present or former residents acting as entrepreneurs or principals.			X
(ii) Academic support from an institution of higher education in Hawai'i.			X
(iii) Investment interest from Hawai'i residents.			X
(iv) Resources unique to Hawai'i that are required for innovative activity.			X
(v) Complementary or supportive industries or government programs or projects.			X
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(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.	X		
(4) Seek to ensure that State business tax and labor laws and administrative policies are equitable, rational, and predictable.			X
(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.			X
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawai'i's small-scale producers, manufacturers, and distributors.			X
(7) Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.			X
(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:			X

**TABLE 4 (continued)**  
**HAWAII STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(a) An industry that can take advantage of Hawai'i's unique location and available physical and human resources.			X
(b) A clean industry that would have minimal adverse effects on Hawai'i's environment.			X
(c) An industry that is willing to hire and train Hawai'i's people to meet the industry's labor needs at all levels of employment.			X
(d) An industry that would provide reasonable income and steady employment.			X
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.			X
(10) Enhance the quality of Hawai'i's labor force and develop and maintain career opportunities for Hawai'i's people through the following actions:			X
(a) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			X
(b) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			X
(c) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			X
(d) Promote career opportunities in all industries for Hawai'i's people by encouraging firms doing business in the State to hire residents.			X
(e) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities.			X
(f) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			X
(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 Hawai'i's residents and visitors.			X
(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.			X
(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.			X
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawai'i's significant natural, scenic, historic, and cultural resources.			X
(5) Develop and maintain career opportunities in the visitor industry for Hawai'i's people, with emphasis on managerial positions.			X
(6) Support and coordinate tourism promotion abroad to enhance Hawai'i's share of existing and potential visitor markets.			X
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			X
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			X
(9) Coordinate visitor industry activities and promotions to business visitors through the State network of advanced data communication techniques.			X
(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.			X
(2) Continue efforts to maintain Federal support to provide stable sugar prices high enough to allow profitable operations in Hawai'i.			X
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X

**TABLE 4 (continued)**  
**HAWAII STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(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.			X
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			X
(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.			X
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			X
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawai'i's agricultural community.			X
(6) Seek favorable freight rates for Hawai'i's agricultural products from interisland and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			X
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			X
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(10) Support the continuation of land currently in use for diversified agriculture.			X
(11) Encourage residents and visitors to support Hawai'i's farmers by purchasing locally grown food and food products.			X
(E) Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			X
(2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.			X
(3) Increase the support for research and development of economically feasible alternative water sources.			X
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			X
(F) Priority guidelines for energy use and development:			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			X
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			X
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			X
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			X
(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 Hawai'i.			X
(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.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(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.			X
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			X
(5) Encourage research activities, including legal research in the information and telecommunications fields.			X
(6) Support promotional activities to market Hawai'i's information industry services.			X
(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.			X
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-104: Population growth and land resources priority guidelines.</b>			
(A) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to ensure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawai'i's people.			X
(2) Manage a growth rate for Hawai'i's economy that will parallel future employment needs for Hawai'i's people.			X
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			X
(4) Encourage major State and Federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			X
(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.			X
(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.			X
(7) Support the development of high technology parks on the neighbor islands.			X
(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.			X
(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			X
(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.			X
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			X
(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.			X
(6) Seek participation from the private sector for the cost of building infrastructure and utilities and maintaining open spaces.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(7) Pursue rehabilitation of appropriate urban areas.			X
(8) Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.			X
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			X
(10) Identify critical environmental areas in Hawai'i 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.	X		
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			X
(12) Utilize Hawai'i'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.			X
(13) Protect and enhance Hawai'i's shoreline, open spaces, and scenic resources.	X		
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community. The Proposed Action will not increase roadway capacity and therefore, will not affect population growth, and will include design elements which enhance the environment.			
<b>226-105: Crime and criminal justice.</b>			
(A) 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.			X
(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.			X
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			X
(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.			X
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			X
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			X
Discussion: The objective is not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-106: Affordable housing.</b>			
(A) Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land, urban land, and public land to meet housing needs of extremely low-, very low-, lower-, moderate-, and above moderate-income households.			X
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			X
(3) Improve information and analysis relative to land availability and suitability for housing.			X



**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawai'i's extremely low-, very low-, lower-, and moderate-income households and residents with special needs.			X
(5) Encourage continued support for government or private housing programs that provide low-interest mortgages to Hawai'i's people for the purchase of initial owner-occupied housing.			X
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			X
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			X
(8) Give higher priority to the provision of quality housing that is affordable for Hawai'i's residents and less priority to development of housing intended primarily for individuals outside of Hawai'i.			X
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-107: Quality education.</b>			
(A) Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.			X
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs.			X
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education workforce.			X
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			X
(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. Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives.			X
(6) Pursue the establishment of Hawai'i's public and private universities and colleges as research and training centers of the Pacific.			X
(7) Develop resources and programs for early childhood education.			X
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education.			X
(9) Strengthen and expand educational programs and services for students with special needs.			X
Discussion: The objective is not applicable, but the Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-108: Sustainability</b>			
(A) Priority guidelines and principles to promote sustainability shall include:			
(1) Encouraging balanced economic, social, community, and environmental priorities.			X
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State.			X
(3) Promoting a diversified and dynamic economy.	X		
(4) Encouraging respect for the host culture.			X
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.			X
(6) Considering the principles of the ahupua'a system.			X

**TABLE 4 (continued)**  
**HAWAI'I STATE PLAN**

S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai'i.			X
Discussion: The Proposed Action will support these objectives and policies by providing an efficient transportation infrastructure to maintain the well-being of the community.			
<b>226-109: Climate change adaptation priority guidelines</b>  Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:			
(1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities.			X
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies.			X
(3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State.			X
(4) Consider Native Hawaiian traditional knowledge and practices in planning for the impacts of climate change.			X
(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.	X		
(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.			X
(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.	X		
(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.			X
(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.			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.	X		
Discussion: The Proposed Action will not impact climate change or sea level rise. The Proposed Action will implement best management practices and mitigation measures to minimize the impact to the environment.			

### 3.20.2 Coastal Zone Management Program

The Hawai'i Coastal Zone Management area encompasses all of the lands within the State except the forest reserve. Therefore, this project is within the Coastal Zone Management area. The project area is within the County of Kaua'i, Special Management Area (SMA) and is not within the Shoreline Setback area.

HRS 205A-2 sets forth the objectives and policies of the coastal zone management program. The Proposed Action will not have any adverse impacts to the SMA guidelines as stated in HRS 205A-26. The Proposed Action also will not have any significant impacts to the Coastal Zone Management Program and the following comments are provided.

#### **OBJECTIVES**

(1) Recreational resources

(A) Provide coastal recreational opportunities accessible to the public.

Comment. The Proposed Action will not impact recreational opportunities to the public. If the Proposed Action does have an impact to Hanalei River, HDOT will work with the community to develop solutions to the impact.

(2) Historic resources

(A) Protect, preserve, and, where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Comment. The Proposed Action will restore native vegetation to the riverbank in the main construction area. In addition, the project will maintain the historic route which traverses the Project Site.

(3) Scenic and open space resources

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

Comment. The Proposed Action will not impact scenic and open space resources.

(4) Coastal ecosystems

- (A) Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Comment. The Proposed Action will be implemented on previously developed property and will not impact coastal ecosystems.

(5) Economic uses

- (A) Provide public or private facilities and improvements important to the State's economy in suitable locations.

Comment. The Proposed Action will maintain a critical link between Hanalei and Kauaʻi which allows for the movement of people, goods and services.

(6) Coastal hazards

- (A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Comment. The Proposed Action is in a flood hazard area and will not increase the hazard to life and property.

(7) Managing development

- (A) Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Comment. The Proposed Action is necessary to maintain the surface transportation link between Hanalei and the rest of Kauaʻi.

(8) Public participation

- (A) Stimulate public awareness, education, and participation in coastal management.

Comment. HDOT has engaged the public in the planning and design process, and for this EA.

(9) Beach protection

- (A) Protect beaches for public use and recreation.

Comment. The Proposed Action will not impact the beach or beach access.

- (10) Marine resources
  - (A) Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Comment. The Proposed Action will not impact marine resources.

## **POLICIES**

- (1) Recreational resources
  - (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 nonpoint 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.

- (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.

Comment. The Proposed Action will not impact recreational resources. If the Proposed Action does have an impact to Hanalei River, HDOT will work with the community to develop solutions to the impact.

- (2) Historic resources
  - (A) Identify and analyze significant archaeological resources.
  - (B) Maximize information retention through preservation of remains and artifacts or salvage operations.
  - (C) Support State goals for protection, restoration, interpretation, and display of historic resources.

Comment. The Proposed Action will not impact archaeological and historical resources.

- (3) Scenic and open space resources
  - (A) Identify valued scenic resources in the coastal zone management area.
  - (B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.
  - (C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources.
  - (D) Encourage those developments that are not coastal dependent to locate in inland areas.

Comment. The Proposed Action will not impact scenic and open space resources.

- (4) Coastal ecosystems
  - (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.



- (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.

Comment. The Proposed Action will not impact coastal ecosystems.

- (5) Economic uses
  - (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 industry facilities and energy-generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area.
  - (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.
    - (iii) The development is important to the State's economy

Comment. The Proposed Action will maintain a surface transportation link between Hanalei and the rest of Kaua'i and have no impact on economic uses.

- (6) Coastal hazards
  - (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 source pollution hazards.
  - (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program
  - (D) Prevent coastal flooding from inland projects

Comment. The Proposed Action will not alter the flood hazard designation.

- (7) Managing development
  - (A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development
  - (B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements.
  - (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.

Comment. HDOT will comply with all Federal, State and county rules and regulations for the proposed improvements.

- (8) Public participation
  - (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
  - (C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Comment. HDOT encourages public participation during the planning process.

- (9) Beach protection
  - (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.

- (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.

Comment. The Proposed Action will not impact the beach area.

(10) Marine resources

- (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 to acquire and inventory information necessary to understand how ocean development activities relate to and impact ocean and coastal resources.
- (E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Comment. The Proposed Action will not impact coastal or marine resources.

### 3.20.3 Kaua‘i General Plan

The *Kaua‘i Kakou – Kaua‘i County General Plan*<sup>10</sup> presents a long-range vision through four (4) overarching goals. These Goals are as follows:

- A Sustainable Island
- A Unique and Beautiful Place
- A Healthy and Resilient People
- An Equitable Place, with Opportunity for All.

The Proposed Action will maintain a transportation link with Hanalei and the rest of Kaua‘i, to allow these goals to be achieved. As the Proposed Action will not increase or decrease the capacity of the Highway, it will not have an impact on the implementation of these goals.

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<sup>10</sup> County of Kauai, Planning Department, *Kauai Kakou – Kauai County General Plan*, 2018 Final Version approved by the County Council.

To achieve these Goals, the plan identified 19 policies to guide growth, as follows:

- Policy #1: Manage Growth to Preserve Rural Character
- Policy #2: Provide Affordable Housing While Facilitating a Diversity of Privately-Developed Housing for Local Families
- Policy #3: Recognize the Identity of Kaua‘i’s Individual Towns and Districts
- Policy #4: Design Healthy and Complete Neighborhoods
- Policy #5: Make Strategic Infrastructure Investments
- Policy #6: Reduce the Cost of Living
- Policy #7: Build A Balanced Multimodal Transportation System
- Policy #8: Protect Kaua‘i’s Scenic Beauty
- Policy #9: Uphold Kaua‘i as a Unique Visitor Destination
- Policy #10: Help Business Thrive
- Policy #11: Help Agricultural Lands b Productive
- Policy #12: Protect Our Watersheds
- Policy #13: Complete Kaua‘i’s Shift to Clean Energy
- Policy #14: Prepare For Climate Change
- Policy #15: Respect Native Hawaiian Rights and Wahi Pana
- Policy #16: Protect Access to Kaua‘i’s Treasured Places
- Policy #17: Nurture Our Keiki
- Policy #18: Honor Our Kūpuna
- Policy #19: Communicate with Aloha

In general, the Proposed Action supports these policies as it maintains a surface transportation link between Hanalei and the rest of Kaua‘i. Several policies which are related to the Proposed Action are:

- Policy #1: Manage Growth to Preserve Rural Character
  - The Proposed Action recognizes the rural character of the Hanalei area and managing or maintaining sustainable growth. Therefore, the Proposed Action replaces the existing two-lane roadway with a similar two-lane roadway, to maintain existing capacity on Kuhio Highway and egress and ingress for the Hanalei community and visitors.
- Policy #5 Make Strategic Infrastructure Investments
  - The Proposed Action will fund the renovation of the roadway, shoulder and riverbank strengthening to maintain the use of Kuhio Highway into the future. This infrastructure investment will continue to provide infrastructure to serve the Hanalei area.
- Policy #7 Build a Balanced Multimodal Transportation System
  - In general, HDOT supports the development of a multimodal transportation system for Kaua‘i. This Proposed Action maintains a surface transportation system for the Hanalei area and is one component of a multimodal system for this area.

### 3.20.4 Kuhio Highway (Route 560) Historic Roadway Corridor Plan

The *Kuhio Highway (Route 560) Historic Roadway Corridor Plan*,<sup>11</sup> is a planning document that provides a framework for decision making and actions on Kuhio Highway. The Plan represents a collaborative effort by HDOT, public officials, business representatives and community leaders.

The Vision of this plan for Kuhio Highway (Route 560) is:

- To develop a community-based planning document utilizing CSD to provide responsiveness and sensitivity to the region's residents, environment, and historic background and culture, and to provide a safe and efficient transportation facility.
- To review and identify the resources and essential qualities of the region, both man-made and natural, and embrace their meaning and importance to the community in relation to the highway corridor.
- To recognize the value and importance of Route 560 to the community and region, and the need to take appropriate actions for its treatment and maintenance.
- To review and account for the long-term transportation needs of the highway over the next 25 years.
- To consider that Route 560 and its various components be a single, interwoven, and inviolable resource. Such an approach will require inter-agency and community coordination at every level.

The Plan outlines several general policies for Route 560 as a rural historic road, as follows:

1. Route 560 is recognized as a historic resource and an asset to the community that should be maintained and preserved, as required.
2. HDOT shall exercise CSD, as an overarching strategy, in the planning process for Kuhio Highway (Route 560). Through the CSD process, HDOT shall recognize and harmonize any preservation, rehabilitation, restoration, reconstruction, maintenance, repair, or improvement works with the natural features, scenic amenities, and historic elements of the highway corridor.
3. Maintenance, repair, and improvements to Kuhio Highway (Route 560) should be subject to the review of the DLNR, and consistent with the Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties. The four treatment approaches of the SOI's Standards are (in hierarchical order from high to low) preservation, rehabilitation, restoration, and reconstruction of historic and cultural resources.

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<sup>11</sup> State of Hawai'i , Department of Transportation, *Kuhio Highway (Route 560) Historic Roadway Corridor Plan*, 2005

4. Decisions concerning the preservation, rehabilitation, restoration or reconstruction of any bridge, stream crossing, structure, or other corridor elements should reflect the facility's historic characteristics and cultural landscape, as specified in the SOI's Standards. Such decisions should take into account safety and maintenance operations as well as aesthetic values.
5. The decision process on any selected design not conforming to existing standards should include a thorough documentation of a diligent evaluation of the design's alternatives and any known associated safety deficiency corrections.
6. Safety considerations shall be incorporated in any maintenance, repair, preservation, rehabilitation, restoration, and improvements on Route 560. Traffic calming devices shall be used on the low-speed road, where applicable, and designed in a manner compatible with the historic character of the corridor.
7. Maintenance operations shall play a major role in the implementation of the plan. Whenever feasible, maintenance or repair work on any roadway element should reflect its original design, material, and color, and follow the Standards of the SOI. Any maintenance work requiring departure from the recommendations of the plan and deemed necessary by HDOT should include input from the community.
8. Highway maintenance, repair, preservation, rehabilitation, restoration, and improvements should recognize the immediate, as well as future needs, of the highway corridor over the next 25 years.
9. Route 560 between Hanalei and Haena shall be designated a "shared use" facility for vehicles and bicycles, as provided in the Bike Plan Hawai'i (BPH). In accordance with the definition provided in the BPH, a shared roadway refers to any street or highway that is open to both bicycles and motor vehicle travel.
10. Identified view planes to the ocean, mountains, coastline, and Hanalei Bay and River shall be preserved and maintained.
11. Emergency plans for collapsed bridges, major flooding, and mud/rock slides, which affect the highway corridor, should be prepared.
12. Community support and participation are encouraged in the implementation of this plan.

The Corridor Plan includes specific elements for the development and maintenance of the Route dependent on which segment of the Route the improvements are proposed. This Project Site is not located in any specific segments specified along Route 560 Corridor Plan. To comply with the Corridor Plan, the Proposed Action will be realigning the roadway within the HDOT right-of-way, and maintaining similar roadway pavement, shoulders and appurtenance as currently exist. Therefore, the current capacity of the roadway for vehicles (including bicycles) is unchanged.



The structural improvements of the riverbank will be lower than the shoulder and not visible from the roadway. The design incorporates design elements which provide a “natural” look to the pile cap, and use of a vegetated riverbank, with the native plant, such as *'Ilie'e*, to create a “greenscape.” These design elements will minimize the visual impact of the improvements from the Hanalei River.

The improvements will not change to the flood characteristics of the area. The new vegetation will include native plants on the riverbank and in the wetland area and will enhance the roadway plantings in the Project Site.

Public participation was provided early in the planning and design project, as HDOT held a community meeting to develop the riverbank design. In addition, preconsultation letters were sent to various government agencies, organizations and individuals as part of the HRS 343 process.

## CHAPTER 4.0

### ANTICIPATED DETERMINATION, FINDINGS, AND REASONS SUPPORTING DETERMINATION

Based on the foregoing analysis, the elements incorporated into the design of the Preferred Alternative (Proposed Action) including, but not limited to property exchange, providing for riverbank stability, permanent erosion controls, and various BMPs for the travel way, shall have insignificant adverse impacts. In addition, the recommended mitigation measures will further prevent impacts, deemed insignificant, to the environment. The Preferred Alternative is compatible with existing and future land uses and activities in the area.

The applicant shall comply with applicable statutes, ordinances, and rules of the Federal, State and county governments and continue to work with the Hanalei community. Therefore, for the Preferred Alternative the anticipated determination is a *Notice of Finding of No Significant Impact* (FONSI) pursuant to HRS Chapter 343 and the provisions of HAR Subchapter 6 of Title 11, Chapter 200.1.

The “Significance Criteria,” Section 12 of the HAR, Title 11, Chapter 200.1, “Environmental Impact Statement Rules,” were reviewed and analyzed. Based on the analysis, the following was concluded.

*(1) Irrevocably commit a natural, cultural, or historic resource.*

The Proposed Action shall not involve the irrevocable commitment to loss or destruction of any natural or cultural resources. The exception will be the construction materials required for the proposed roadway improvements.

*(2) Curtail the range of beneficial uses of the environment.*

The Proposed Action shall not curtail the range of beneficial uses of the environment, as the area is designated an Agricultural land use and in Federal lands. The Proposed Action will maintain the critical link between Hanalei and the rest of Kaua‘i to provide safe and efficient transportation.

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

The Proposed Action does not conflict with the State’s long-term environmental policies, goals, or guidelines. The State’s environmental policies and guidelines are set forth in Chapter 344, Hawai‘i Revised Statutes, *State Environmental Policy*.

Two (2) broad policies are espoused: conservation of natural resources and enhancement of quality of life. In regard to the former, the Proposed Action would not consume significant natural resources. The latter will provide a surface transportation link for the well-being of the community.

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

The Proposed Action shall maintain the transportation link and continue to serve the community, Kaua‘i County and the State, and therefore does not have a substantial adverse impact economic or social welfare of the community or the State.

*(5) Have a substantial adverse effects on public health.*

The Proposed Action maintains the surface transportation link and will support the public health needs and facilities. Therefore, the Proposed Action will not substantially adversely impact public health.

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

The Proposed Action shall not have any substantial impacts, primary or secondary, on socio-economic categories and public facilities. The Proposed Action shall not commit to any actions that will cause secondary impacts.

*(7) Involve a substantial degradation of environmental quality.*

The Proposed Action shall have no substantial degradation of environmental quality, and no adverse environmental or public health impacts with the BMPs implemented.

*(8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions.*

The Proposed Action does not involve a commitment to larger actions, nor would it have any cumulative impacts that would result in considerable effects on the environment.

*(9) Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat.*

The Project Site is within the Hanalei National Wildlife Refuge (HNWR), and HDOT shall exchange properties to increase the habitat acreage of the HNWR. HDOT has been working with HNWR staff to ensure there is no impact to listed species or to the Refuge.

The Project Site has no rare, threatened or endangered species, but it is known that listed avifauna may overfly the site or use Hanalei River near the Project Site. Therefore, natural resources BMPs and mitigation measures will be implemented to minimize or reduce the effects to rare, threatened, or endangered species. Therefore, the Proposed Action shall not have substantial effects to rare, threatened, or endangered species.

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

The Proposed Action shall not have any substantial adverse impacts to air or water quality or to ambient noise levels. Construction activities will comply with the applicable DOH air and water quality rules and regulations, and construction noise rules and regulations. Construction and permanent BMPs included in the Preferred Alternative shall protect the water quality in the river and the bay.

*(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 Proposed Action is located within a flood area, as depicted in the Flood Insurance Rate Maps (FIRM). However, the Proposed Action shall not have substantial or significant adverse impacts to the floodplain, tsunami zone, beach, sea-level rise, or erosion-prone area.

*(12) Have a substantial adverse effect on scenic vistas and view planes, during day or night identified in county or State plans or studies.*

The Proposed Action is within Hanalei Valley which is considered a scenic area. The Proposed Action designed to minimize or have no substantial adverse impact on the visual character of the area and therefore will have an insignificant impact to the scenic vistas and view planes in the area.

*(13) Require substantial energy consumption or emit substantial greenhouse gases.*

The Proposed Action will not require substantial amounts of energy and therefore will have no significant impact to energy consumption or generation and will not cause substantial greenhouse gas emissions.

## REFERENCES

Belt Collins Hawai'i , Ltd. and Kuhio Highway (Route 560) Community Advisory Committee, *Kuhio Highway (Route 560) Historic Roadway Corridor Plan*, Prepared for the State of Hawai'i , Department of Transportation, 2005.

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# APPENDIX A

## PRECONSULTATION CORRESPONDANCE





## **APPENDIX A PRECONSULTATION LIST**

This Appendix provides a list of agencies, organizations and individuals which were contacted for the preconsultation phase of this HRS 343 Environmental Assessment. This Appendix also, contains the following.

1. A sample of the preconsultation letter
2. Response letters (emails) from the agencies, organizations and individuals
  - a. These agencies, organizations and individuals which sent response letters (emails) have a \* next to their names.
3. HDOT response letters (emails) to the responding agencies, organizations, and individuals.

### **FEDERAL AGENCIES**

U.S. Army Corps of Engineers, U.S Department of the Army, Pacific Ocean Division \*

U.S. Department of the Army

U.S. Department of Interior, Fish and Wildlife Service

U.S. Department of Interior, Hanalei Natural Wildlife Refuge

U.S. Department of Interior, Pacific Island Ecosystem Research Center

U.S. Geological Survey, Biological Resources Division

U.S. Environmental Protection Agency, Pacific Island Contact Office

U.S. Environmental Protection Agency, Region 9

US Federal Highways Administration, Office of Division Administrator

### **STATE OF HAWAII AGENCIES**

Department of Agriculture

Department of Accounting and General Services

Department of Business, Economic Development and Tourism, Planning Office

Department of Health

Department of Health, Environmental Health Administrator

Department of Hawaiian Home Lands

Department of Land and Natural Resources \*

Department of Land and Natural Resources, State Historic Preservation Division

Department of Transportation

Department of Transportation, Airports \*

Department of Transportation, Harbors

Department of Transportation, Statewide Transportation Planning Office

Office of Hawaiian Affairs

Office of Hawaiian Affairs (OHA) - Kauai Island

## **COUNTY OF KAUAI**

Fire Department  
Planning Department  
Police Department  
Public Works Department \*  
Transportation Agency  
Emergency Management Agency  
Department of Water  
Office of Mayor

## **PUBLIC ORGANIZATIONS**

Ahahui Kiwila Hawaii O Moikeha  
Hanalei Garden Farms Condo Association  
Hanalei Hawaiian Civic Clubs  
Hanalei Land Company  
Hanalei Watershed Hui \*  
Kaieie Foundation  
Konohiki Restoration Project  
Mahamoku Ohana Council  
Powers Ohana  
Waipa Foundation

## **INDIVIDUALS**

Cowden, Charlie  
Cowden, Claudia  
Cowden, Felicia  
Cummings, Sherri  
Dixon, Berlinda  
Ewald, Bruno  
Luff, Chris  
Luff, Cynthia  
Manoogian, D.  
Nishimoto, Bryson  
Robeson, Barbara  
Ross, Luca  
Sheehan, Juliette  
Sheehan, Michael  
Stewart, David  
Yokotake, Sherrie

**APPENDIX A  
PRECONSULTATION  
SAMPLE LETTER**





**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII**  
**DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

HWY-K 4.240062

March 29, 2024

TO: Name  
Title  
Department

FROM: LAWRENCE J. DILL, P.E.  
DISTRICT ENGINEER, KAUAI, HIGHWAYS DIVISION

SUBJECT: PRECONSULTATION (PRE-ASSESSMENT) FOR THE HRS 343  
ENVIRONMENTAL ASSESSMENT  
KUHIO HIGHWAY SHOULDER IMPROVEMENTS  
ROUTE 560 IN THE VICINITY OF HANAIEI BRIDGE  
DISTRICT OF HANAIEI, COUNTY OF KAUAI, STATE OF HAWAII  
TAX MAP KEYS (4) 5-4-004:999 AND (4) 5-4-004:030

The Hawaii Department of Transportation (HDOT), Highways Division has determined that a Hawaii Revised Statute, Chapter 343 (HRS 343) Environmental Assessment is required for the subject project. The HRS 343 Environmental Assessment will be prepared in accordance with the Hawaii Administrative Rules 11-200.1, as revised. The Environmental Assessment will disclose the potential impacts (and their significance), if any, caused by the proposed project.

### **Existing Conditions**

The Hanalei River south bank has continually eroded over time and has impacted the Kuhio Highway (Route 560) infrastructure. The heavy rainfall and corresponding heavy river flow, in April 2018, exacerbated the erosion problem. The erosion of the streambank has undermined the highway shoulder and led to the destabilization of the roadside guardrail and negatively impacted the structural integrity of the subgrade, base course, and asphalt pavement.

### **Proposed Project**

The HDOT Highways Division is proposing to structurally stabilize the Hanalei River south bank to structurally support the Kuhio Highway pavement, shoulder, and appurtenances. The project location is approximately 0.4 miles west of the Kuhio Highway and Ohiki Road intersection (see Figure 1)

### **Proposed Alternative**

The proposed alternative is to construct a structurally stabilized wall with a vegetated earth reinforced stream bank or similar concept using geotextile fabric or grids to address progressive erosion along the northern side of the highway. The stabilization wall and reinforced streambank would be approximately 300 feet in length.

The proposed construction area is less than one (1) acre and falls within two (2) parcels of land, as shown on the attached map (See Figure 2). The proposed parcels are identified as Tax Map Key (4)5-4-004:030 owned by the United State of America and Tax Map Key (4)5-4-004:999 owned by the State of Hawaii. The proposed project will require the acquisition of a sliver of land from Tax Map Key (4)5-4-004:030 by the Highways Division.

### **Preconsultation period and consulting party request**

The HDOT Highways Division respectfully requests your input, comments, and/or concerns on the proposed project and associated potential impacts in this preconsultation (pre-assessment) phase of the Environmental Assessment. In addition, if you would like to be a “consulted party” for this Environmental Assessment, please provide your written request and your contact information. Comments and consulted party requests shall be submitted to the following address or email, by April 29, 2024.

Lawrence Dill, P.E.  
Kauai District Engineer  
1720 Haleukana Street  
Lihue, Hawaii 96766

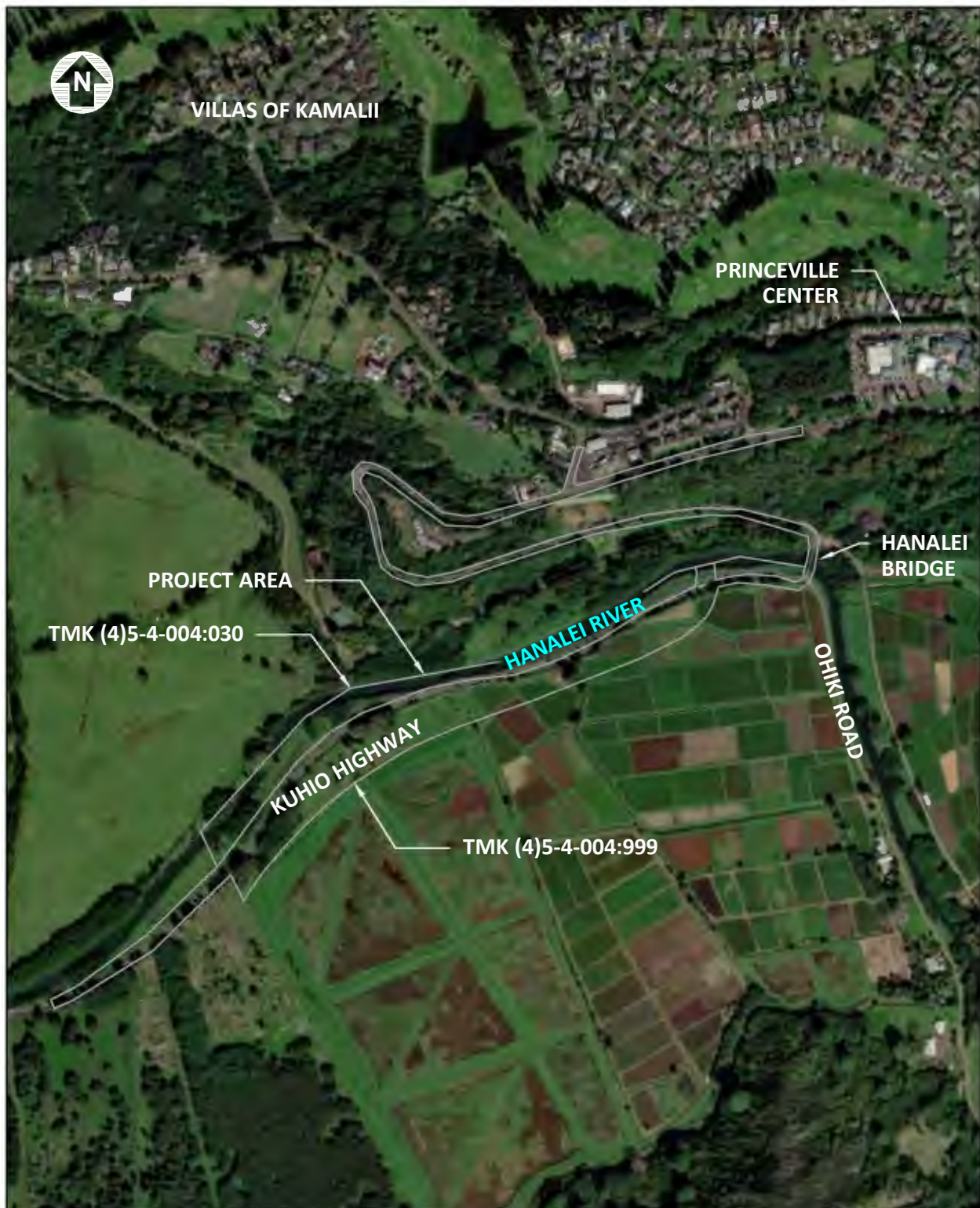
Comments and requests can also be submitted to [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

If you have any questions, please contact Eric Fujikawa, Highways Kauai District Design Engineer at (808) 241-3015 or by email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

Attachments

XX:xx  
c: FHWA

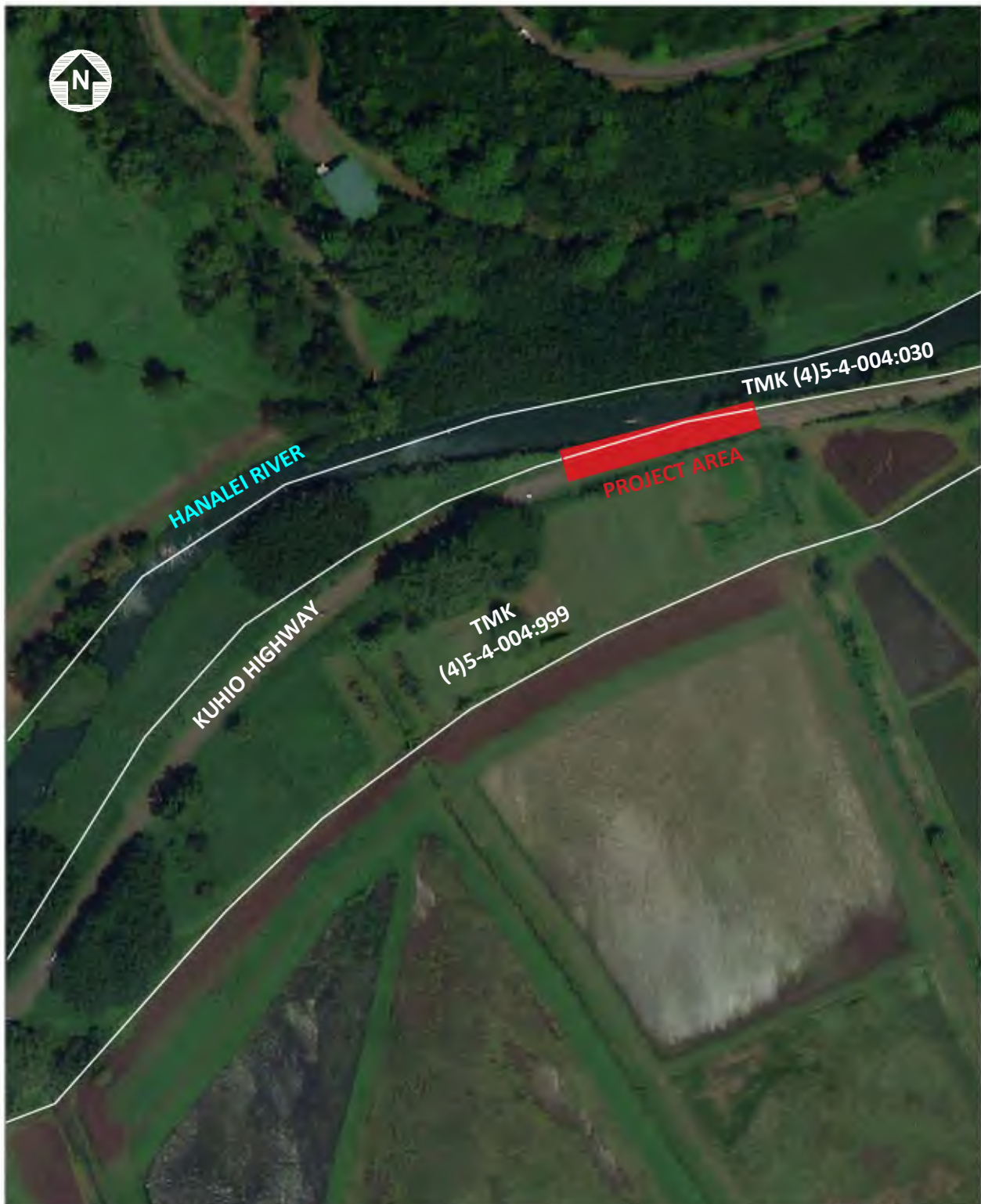




**NOT TO  
SCALE**

**LOCATION MAP:  
TMK (4)5-4-004:030 & TMK (4)5-4-004:999**

**FIGURE  
1**



**NOT TO  
SCALE**

**CONSTRUCTION AREA MAP:  
TMK (4)5-4-004:030 & TMK (4)5-4-004:999**

**FIGURE  
2**

**APPENDIX A  
PRECONSULTATION  
AND RESPONSE**





## Brian Ishii

---

**From:** Fujikawa, Eric I <eric.i.fujikawa@hawaii.gov>  
**Sent:** Monday, September 29, 2025 12:36 PM  
**To:** Makaala Kaaumoana  
**Cc:** Kimo Aiu  
**Subject:** RE: [EXTERNAL] Fwd: Kuhio Highway Shoulder Improvements - Streambank Stabilization - rendering

[EXTERNAL EMAIL]

Hi Makaala,

As we prepare our draft EA for publication, I don't think we responded to your below email comment regarding your interest in the plant selection and sourcing for the project.

Thank you again for your comments on the preconsultation process for the HRS 343 for the Kuhio Highway Shoulder Improvement project, near Hanalei Bridge, in your email dated April 30, 2024. The conceptual drawing provided to you in June 2024 will be presented in the Draft EA on Figure 4.

In regard to your comments on plant selection, the project plans and specifications include provisions requiring the Contractor to consult with a vegetation specialist to assist with selection of plant materials in order to select a type of vegetation that is well suited for the environment (weather, climate, exposure, etc.) and availability. The construction plans also includes the Department of Land and Natural Resources, Division of Forestry and Wildlife's recommendation to consult [www.plantpono.org](http://www.plantpono.org) for guidance on the selection and evaluation of landscaping plants and to determine the potential invasiveness of plants proposed for use in the project. In addition, based on earlier feedback from the Hanalei community, the use of 'Ilie'e was recommended and will be considered for the final design.

Please let us know if you have any questions.

Thank you,  
Eric

**From:** Makaala Kaaumoana <makaala@hanaleiwatershedhui.org>  
**Sent:** Monday, July 1, 2024 11:58 AM  
**To:** Fujikawa, Eric I <eric.i.fujikawa@hawaii.gov>  
**Subject:** [EXTERNAL] Fwd: Kuhio Highway Shoulder Improvements - Streambank Stabilization - rendering

Aloha Eric,  
I appreciate this rendering. I am interested in the specific plant selection and source of materials.  
Mahalo,  
Makaala

----- Forwarded message -----

From: **Brian Ishii** <[bishii@eknahawaii.com](mailto:bishii@eknahawaii.com)>

Date: Thu, Jun 27, 2024 at 10:30 AM

Subject: Kuhio Highway Shoulder Improvements - Streambank Stabilization - rendering

To: [makaala@hanaleiwatershedhui.org](mailto:makaala@hanaleiwatershedhui.org) <[makaala@hanaleiwatershedhui.org](mailto:makaala@hanaleiwatershedhui.org)>

Cc: Kimo Aiu <[jaiu@atahawaii.com](mailto:jaiu@atahawaii.com)>, Fujikawa, Eric I <[eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov)>, Motomi Otsubo <[motsubo@atahawaii.com](mailto:motsubo@atahawaii.com)>, Terrance S. Arashiro <[tarashiro@atahawaii.com](mailto:tarashiro@atahawaii.com)>

Ms. Makaala Kaaumoana

Thank you for your interest and participation in the project. As per your request through Eric Fujikawa of HDOT-Highways - Kauai District, I am sending you a rendering showing the designed exterior plantings and boulderscape, as well as the subsurface structural elements.

The design is similar to the shoreline restoration project at the Dolphin Restaurant that you mentioned to my staff, which is downstream of the HDOT project.

If you have further questions or comments, please contact me or Eric Fujikawa at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

Sincerely

Brian T. Ishii

EKNA Services, Inc.

--

Makaala Kaaumoana (she/her)

Executive Director


Hanalei Watershed Hui

808-346-5458

[www.hanaleiwatershedhui.org](http://www.hanaleiwatershedhui.org)

**STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
M E M O R A N D U M**

**TO:** LAWRENCE DILL, HWY-K AIR-EP 24.0039  
**DATE:** April 30, 2024

**FROM:** NATHAN KANESHIGE, AIR-E 

**SUBJECT:** PRECONSULTATION (PRE-ASSESSMENT) FOR THE HRS 343  
ENVIRONMENTAL ASSESSMENT KUHIO HIGHWAY SHOULDER  
IMPROVEMENTS, VICINITY OF HANAIEI BRIDGE DISTRICT OF  
HANAIEI, ISLAND OF KAUAI PROJECT NO. 560A-02-21 TAX MAP  
KEY(S): (4) 5-4-004:999; (4) 5-4-004:030

The Hawaii Department of Transportation has reviewed the subject project and has no comments.

If you have any questions, please contact Raymond Severn, our Airports Planner, at (808) 838-8817 or via email at [raymond.s.severn@hawaii.gov](mailto:raymond.s.severn@hawaii.gov).

c: Mr. Gordon K. Wong, Federal Aviation Administration  
AIR-K, AIR-L



**From:** Lara, Kirsten F CIV USARMY CEPOH (USA) <[Kirsten.F.Lara@usace.army.mil](mailto:Kirsten.F.Lara@usace.army.mil)>  
**Sent:** Tuesday, May 7, 2024 4:01 PM  
**To:** Fujikawa, Eric I <[eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov)>  
**Subject:** [EXTERNAL] POH-2021-00165 HDOT, Kuhio Highway Shoulder Improvements Project

Aloha Eric,

The US Army Corps of Engineers (Corps) received your request for comments on the Kuhio Highway Shoulder Improvements Project. After review of the provided information, it appears that jurisdictional waters may be present within your proposed project boundaries. Specifically any discharge of fill material below the Ordinary High Water Mark (OHWM) of Hanalei River to stabilize the southern bank to structurally support the adjacent Kuhio Highway would require a permit under the Corps Section 404 authority.

The Corps' regulatory authorities are based on Section 10 of the Rivers and Harbors Act (RHA) of 1899 and Section 404 of the Clean Water Act. Section 10 of the RHA of 1899 prohibits the obstruction or alteration of any navigable water of the U.S. (WOTUS) without a Department of the Army (DA) permit. Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into WOTUS without a DA permit. When your project is being developed, we ask that you identify areas that may fall within the Corps jurisdiction as WOTUS such as streams, rivers, and wetlands.

Because the proposed work would require a permit, we ask that you fill out an application (attached "Eng\_Form\_4345"). We must also evaluate the project for any impacts to resources such as threatened or endangered species, historic properties, and/or essential fish habitat, and consult if necessary. When filling out your permit application please include detailed plans/drawings of the proposed project where streams or wetlands are present. Include a clear line indicating the OHWM in your plans and also include the amount and type of fill that would be placed below the OHWM. Example plan drawings are attached as a reference.

A permit is not required if all work being done is located in uplands and/or above the OHWM.

Please visit <https://www.poh.usace.army.mil/Missions/Regulatory/Permits/Nationwide-Permits/> to find more information about our program and to apply for a permit. Email permit applications to [CEPOH-RO@usace.army.mil](mailto:CEPOH-RO@usace.army.mil), as we have gone paperless. Feel free to contact me with any further questions.

Mahalo,



**Kirsten Lara**  
Biologist/Regulatory Specialist  
U.S. Army Corps of Engineers  
Honolulu District  
Building 252, Fort Shafter, Hawai'i  
96858  
**Email** [kirsten.f.lara@usace.army.mil](mailto:kirsten.f.lara@usace.army.mil)  
**Phone** 808-835-4307

---

**From:** CEPOH-RO, POH <[CEPOH-RO@usace.army.mil](mailto:CEPOH-RO@usace.army.mil)>

**Sent:** Tuesday, April 30, 2024 10:06 AM

**To:** [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov); [janil.ke@hawaii.gov](mailto:janil.ke@hawaii.gov)

**Cc:** Lara, Kirsten F CIV USARMY CEPOH (USA) <[Kirsten.F.Lara@usace.army.mil](mailto:Kirsten.F.Lara@usace.army.mil)>; CEPOH-RO, POH <[CEPOH-RO@usace.army.mil](mailto:CEPOH-RO@usace.army.mil)>

**Subject:** FW: HRS Chapter 343 Pre-consultation for Kuhio Highway Shoulder Improvements, Vic of Hanalei Bridge - USACOE, POD

Aloha Eric,

We received the attached request for comments from General Gibbs office in Pacific Ocean Division (POD). For future submittals, please email those directly to the Regulatory Office ([CEPOH-RO@usace.army.mil](mailto:CEPOH-RO@usace.army.mil)). Sometimes it takes quite awhile for these to get routed back to us and assigned. For clarification, these actions are handled at the District Level, so they are processed through the Honolulu District rather than POD. We just don't want your projects to get lost in the shuffle 😊

Your request has been assigned to Ms. Kirsten Lara, and she has been cc'd on this email. She will contact you directly if any clarification is needed.

Mahalo,

Jen Martin

Chief, Regulatory Branch

US Army Corps of Engineers, Honolulu District

808-835-4300



**US Army Corps  
of Engineers**

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**From:** Bliss, Kate M CIV USARMY CEPOD (USA) <[Kate.M.Bliss@usace.army.mil](mailto:Kate.M.Bliss@usace.army.mil)>

**Sent:** Wednesday, April 24, 2024 11:34 AM

**To:** Martin, Jennifer L (Jen) CIV USARMY CEPOH (USA) <[Jennifer.L.Martin@usace.army.mil](mailto:Jennifer.L.Martin@usace.army.mil)>

**Subject:** FW: HRS Chapter 343 Pre-consultation for Kuhio Highway Shoulder Improvements, Vic of Hanalei Bridge - USACOE, POD

Hi Jen,

Sending this attachment to you for your review and action (if needed).

Kate M. Bliss

Regulatory & Environmental Program Manager

U.S. Army Corps of Engineers

Pacific Ocean Division

Fort Shafter, HI 96816

Office: 808-835-4626

Mobile: 808-202-6478

**From:** Lee, Susan Y CIV USARMY CEPOD (USA) <[Susan.Y.Lee@usace.army.mil](mailto:Susan.Y.Lee@usace.army.mil)>

**Sent:** Wednesday, April 24, 2024 9:26 AM

**To:** Bliss, Kate M CIV USARMY CEPOD (USA) <[Kate.M.Bliss@usace.army.mil](mailto:Kate.M.Bliss@usace.army.mil)>

**Cc:** POD Public Affairs Office <[pod-pao@usace.army.mil](mailto:pod-pao@usace.army.mil)>

**Subject:** FW: HRS Chapter 343 Pre-consultation for Kuhio Highway Shoulder Improvements, Vic of Hanalei Bridge - USACOE, POD

Aloha and good morning, Kate!

Could you please assist? The attached letter is addressed to BG Gibbs, but should it be sent to POH Regulatory?

Very Respectfully,

**SUSAN Y. LEE**

Dep. Public Affairs Bldg 525, Ste A326

Fort Shafter, HI 96858

Pacific Ocean Division

U.S. Army Corps of Engineers

DSN: 808.855.4716 | Cell: 808.260.0228

[www.pod.usace.army.mil](http://www.pod.usace.army.mil)

[www.linkedin.com/company/usace-pod](https://www.linkedin.com/company/usace-pod)

[www.facebook.com/PODCorps](https://www.facebook.com/PODCorps)

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**From:** Ke, Janil <[janil.ke@hawaii.gov](mailto:janil.ke@hawaii.gov)>

**Sent:** Wednesday, April 24, 2024 8:49 AM

**To:** POD Public Affairs Office <[pod-pao@usace.army.mil](mailto:pod-pao@usace.army.mil)>

**Cc:** Fujikawa, Eric I <[eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov)>

**Subject:** [Non-DoD Source] HRS Chapter 343 Pre-consultation for Kuhio Highway Shoulder Improvements, Vic of Hanalei Bridge - USACOE, POD

Aloha,

Attached for your review/response please find HDOT's HRS Chapter 343 pre-consultation letter for the following State-funded Highways Kauai project:

Kuhio Highway Shoulder Improvements

Vicinity of Hanalei Bridge

Project No. 560A-02-21

Mahalo!

Janil Ke

Department of Transportation for Highways

Kaua'i District

Tel: 241-3027

Cell: 635-6902

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Ogenki De

This message from Austin, Tsutsumi & Associates, including any attachments, is intended solely for the recipient identified above and should not be opened, read, or utilized by any other party. This message is as intended above and shall not be construed as official project information or direction except as expressly provided in the contract documents. If you received this message in error, please immediately delete it and all copies, and promptly notify the sender. Thank you.

## Erik Fujikawa

---

**From:** Fujikawa, Eric I <eric.i.fujikawa@hawaii.gov>

**Sent:** Monday, November 24, 2025 4:20 PM

**To:** Lara, Kirsten F CIV USARMY CEPOH (USA) <Kirsten.F.Lara@usace.army.mil>

**Cc:** Kimo Aiu <jaiu@atahawaii.com>; Bautista, Joel O <joel.o.bautista@hawaii.gov>

**Subject:** RE: POH-2021-00165 HDOT, Kuhio Highway Shoulder Improvements Project

[EXTERNAL EMAIL]

Hi Kirsten,

Thank you for your comments during the preconsultation process of the HRS 343 Environmental Assessment (EA) of the subject project, in your email dated May 7, 2024. The list of permits, including the Clean Water Act 404 and 401 permits, are presented in the Draft EA *Section 1.6 List of Permits and Approvals*.

HDOT will complete application, Eng\_Form\_4345, and we are working with USCOE Regulatory branch on a Pre-construction Notification (PCN) with the Regulatory Branch.

We appreciate your involvement with this project and please let us know if you have any questions.

Thank you,

**Eric Fujikawa, PE, PLS**

District Engineer

Hawaii Department of Transportation

Highways, Kauai District

1720 Haleukana Street

Lihue, Hawaii 96766

Phone: (808) 241-3015

Fax: (808) 241-3011

Mobile: (808) 278-8423

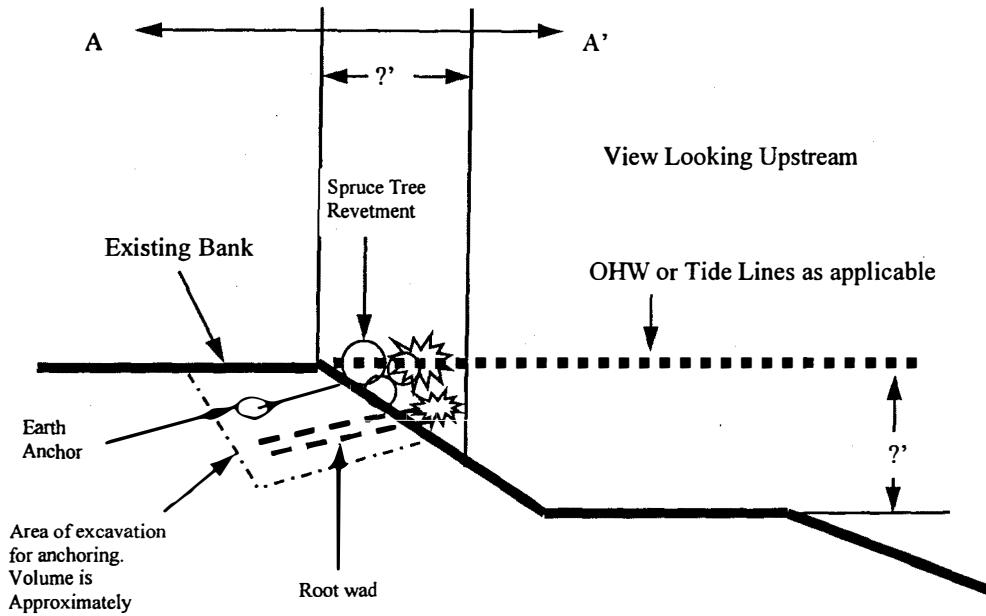
Email: [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov)

<p><b>BANK STABILIZATION - BIOENGINEERING—PLAN VIEW</b></p> <p>Anywhere Road</p> <p>North Arrow</p>		<p><b>House</b></p> <p>[Address]</p>		<p>Property Owner</p> <p>Name and Address of Neighboring</p>		<p>Property Owner</p> <p>Name and Address of Neighboring</p>	
<p>Flow</p> <p>[NAME] RIVER</p>		<p>Root Wad</p> <p>Trunk</p> <p>Earth Anchors</p> <p>OHWM or Tide Lines if applicable</p> <p>Natural Shoreline</p>		<p>OHWM or Tide Lines if applicable</p> <p>Natural Shoreline</p>		<p>OHWM or Tide Lines if applicable</p> <p>Natural Shoreline</p>	
<p>Scale: 1" = 100'</p>		<p>TM K:</p> <p>County - Zone - Section - Plat - Parcel</p> <p>Date //</p>		<p>Applicant:</p> <p>File No.: POH-XXXX-XXXX</p> <p>Waterway:</p> <p>Proposed Activity: Bank Protection—Bioengineering</p>		<p>City, County, State/Territory</p> <p>Directions to site</p>	

# BANK STABILIZATION (BIOENGINEERING) CROSS SECTION A-A'

? cubic feet of bioengineering material per running foot of shoreline.

Approximately  
? cu. yds. total



City, County, State/Territory

Directions to Site



Scale: ?" = ?'

Applicant:

File No.: POH-XXXX-XXXX

Waterway:

Proposed Activity: Bank Stabilization

TMK:

County - Zone - Section - Plat - Parcel

Sheet 1 of ?

Date / /

**U.S. ARMY CORPS OF ENGINEERS  
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT  
(33 CFR 325)**

OMB APPROVAL NO. 0710-0003  
EXPIRES: 31 AUGUST 2012

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT**

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

**(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)**

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

**(ITEMS BELOW TO BE FILLED BY APPLICANT)**

5. APPLICANT'S NAME First -                      Middle -                      Last - Company - E-mail Address -		8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First -                      Middle -                      Last - Company - E-mail Address -	
6. APPLICANT'S ADDRESS: Address- City -                      State -                      Zip -                      Country -		9. AGENT'S ADDRESS: Address- City -                      State -                      Zip -                      Country -	
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence                      b. Business                      c. Fax		10. AGENTS PHONE NOS. w/AREA CODE a. Residence                      b. Business                      c. Fax	

**STATEMENT OF AUTHORIZATION**

11. I hereby authorize, \_\_\_\_\_ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

\_\_\_\_\_  
SIGNATURE OF APPLICANT

\_\_\_\_\_  
DATE

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see instructions)			
13. NAME OF WATERBODY, IF KNOWN (if applicable)		14. PROJECT STREET ADDRESS (if applicable) Address	
15. LOCATION OF PROJECT Latitude: °N                      Longitude: °W		City -                      State-                      Zip-	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID                      Municipality Section -                      Township -                      Range -			



17. DIRECTIONS TO THE SITE

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

**USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type	Type	Type
Amount in Cubic Yards	Amount in Cubic Yards	Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres  
or  
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? ☐ Yes ☐ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City -

State -

Zip -

b. Address-

City -

State -

Zip -

c. Address-

City -

State -

Zip -

d. Address-

City -

State -

Zip -

e. Address-

City -

State -

Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

\* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

\_\_\_\_\_  
SIGNATURE OF APPLICANT

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE OF AGENT

\_\_\_\_\_  
DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

# AR6640 comments HWY-K 4.240062 343

## Consultation Hanale Stream Bank

Final Audit Report

2024-05-17

Created:	2024-05-17 (Hawaii-Aleutian Standard Time)
By:	Kendall Tucker (kendall.l.tucker@hawaii.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAABZZHBY8h8abHOJ49ka75wXsS3duudaJP
Number of Documents:	3
Document page count:	7
Number of supporting files:	0
Supporting files page count:	0

## "AR6640 comments HWY-K 4.240062 343 Consultation Hanale Stream Bank" History

-  Document created by Kendall Tucker (kendall.l.tucker@hawaii.gov)  
2024-05-17 - 12:17:15 PM HST- IP address: 174.202.3.24
-  Agreement viewed by Kendall Tucker (kendall.l.tucker@hawaii.gov)  
2024-05-17 - 12:18:05 PM HST- IP address: 174.202.3.24
-  Document emailed to David Sakoda (david.sakoda@hawaii.gov) for signature  
2024-05-17 - 12:18:45 PM HST
-  Email viewed by David Sakoda (david.sakoda@hawaii.gov)  
2024-05-17 - 1:22:11 PM HST- IP address: 104.47.64.254
-  Agreement viewed by David Sakoda (david.sakoda@hawaii.gov)  
2024-05-17 - 1:22:13 PM HST- IP address: 162.221.246.37
-  Document e-signed by David Sakoda (david.sakoda@hawaii.gov)  
Signature Date: 2024-05-17 - 1:25:03 PM HST - Time Source: server- IP address: 162.221.246.37
-  Agreement completed.  
2024-05-17 - 1:25:03 PM HST

JOSH GREEN, M.D.  
GOVERNOR | KE KANAKA

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KANAKA



**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII**  
**DEPARTMENT OF LAND AND NATURAL**  
**RESOURCES DIVISION OF AQUATIC RESOURCES**  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

Date: **5-17-24**

DAR # **AR6640**

DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

**RYAN K.P. KANAKA'DLE**  
FIRST DEPUTY

**DEAN D. UYENO**  
ACTING 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

MEMORANDUM

TO: Brian J. Neilson  
DAR Administrator

FROM: **Heather Ylitalo-Ward**, Aquatic Biologist

SUBJECT: **Preconsultation (Pre-assessment) for the HRS 343 environmental  
assessment Kuhio Highway shoulder improvements**

Request Submitted by: **Lawrence J. Dill, P.E. Kaua'i District Engineer**  
DISTRICT OF HANAIEI, ISLAND OF KAUAI

Location of Project: **TAX MAP KEY(S): (4) 5-4-004:999; (4) 5-4-004:030**

Brief Description of Project:

**The HDOT Highways Division is proposing to structurally stabilize the Hanalei River south bank to structurally support the Kuhio Highway pavement, shoulder, and appurtenances.**

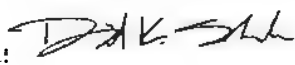
**The project location is approximately 0.4 miles west of the Kuhio Highway and Ohiki Road intersection.**

**The proposed alternative is to construct a structurally stabilized wall with a vegetated earth reinforced stream bank or similar concept using geotextile fabric or grids to address progressive erosion along the northern side of the highway. The stabilization wall and reinforced streambank**

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: **May 17, 2024**  
For Brian J. Neilson  
DAR Administrator

DAR# AR6640

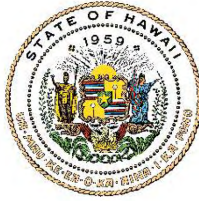
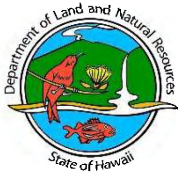
Comments

Thank you for the opportunity to provide comments. In the event of either the proposed project or alternative, please include the following best management practices (BMPs) to minimize the potential for erosion, siltation, pollution, turbidity, and degradation of the aquatic environment:

- 1) Stream bank areas denuded of vegetation should be planted or covered as quickly as possible to prevent erosion and the vegetation cleared along stream banks should be removed and prevented from falling into the stream/estuary environment;
- 2) Scheduling stream maintenance activities during periods of minimal rainfall;
- 3) Use of silt curtains, fiber rolls, silt fencing, etc. to prevent sediments from increasing water turbidity and sediment run-off;
- 4) Prevent construction materials, petroleum products, debris and landscaping products from falling, blowing or leaching into the aquatic environment;
- 5) Reduce as much as possible the disturbance and impacts to natural river bottom substrate;
- 6) Complete daily inspection of equipment for conditions that could cause spills or leaks; clean equipment prior to operation near the water; proper site storage, refueling, and servicing sites; and implement spill response procedures and stormy weather preparation plans; and
- 7) Any activity related debris that may pose an entanglement hazard to protected species must be removed from the project site if not actively being used and/or at conclusion of the day;

JOSH GREEN, M.D.  
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

RYAN K.P. KANAKA'OLE  
FIRST DEPUTY


DEAN D. UYENO  
ACTING DEPUTY DIRECTOR - WATER

BRIAN J. NEILSON  
ADMINISTRATOR - AQUATIC RESOURCES

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA  
DIVISION OF AQUATIC RESOURCES  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

May 15, 2024

TO: Dawn N. S. Chang, Chairperson  
Department of Land and Natural Resources

FROM: Brian J. Neilson, Administrator   
Division of Aquatic Resources

SUBJECT: DAR Acting Administrator

I will be on personal leave from May 17, 2024, through June 10, 2024. The following staff will be acting administrators:

David Sakoda	5/17/24 - 5/24/24
Edward Kekoa	5/25/24 – 5/28/24
Kimberly Fuller	5/29/24 – 5/31/24
Edward Kekoa	6/01/24 – 6/05/24
David Sakoda	6/06/24 – 6/10/24

Your usual cooperation and courtesy extended to David, Luna, and Kim are greatly appreciated.



DAWN N. S. CHANG, CHAIRPERSON

May 16, 2024

DATE

C: DLNR HR  
DAR Staff

JOSH GREEN, M.D.  
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA

DIVISION OF FORESTRY AND WILDLIFE  
1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

RYAN K.P. KANAKA'OLE  
FIRST DEPUTY

DEAN D. UYENO  
ACTING 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

May 22, 2024

Log no.4534  
Reference no.HWY-K 4.240062

MEMORANDUM

**TO:** LAWRENCE J. DILL, Kaua'i District Engineer  
Department of Transportation

**FROM:** LINDSEY NEITMANN, Acting Wildlife Program Manager  
Division of Forestry and Wildlife

**SUBJECT:** Pre-Consultation Request for the Kuhio Highway Shoulder  
Improvements, Vicinity of Hanalei Bridge, District of Hanalei, Kaua'i

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your pre-consultation for the Kuhio Highway Shoulder Improvements in the vicinity of Hanalei Bridge (Project No. 560A-02-21) located on the island of Kaua'i; TMK: (4)5-4-004:999; (4)5-4-004:030. The Hawaii Department of Transportation (HDOT) Highways Division proposes to structurally stabilize the Hanalei River south bank to structurally support the Kuhio Highway pavement, shoulder, and appurtenances. The project is located approximately 0.4 miles west of the Kuhio Highway and Ohiki Road intersection.

The State listed 'ōpe'ape'a or Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) could potentially occur at or in the vicinity of the project and may roost in nearby trees. Any required site clearing should be timed to avoid disturbance to bats during their 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. Barbed wire should also be avoided in any construction as bats can become ensnared and killed by such fencing material during flight.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in their collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used be fully shielded to minimize the attraction of seabirds. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season, from September 15 through December 15, when young seabirds make their maiden voyage to sea.



If nighttime construction is required during the seabird fledgling season (September 15 to December 15), we recommend that a qualified biologist be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting. If seabirds are seen circling around the area, lights should then be turned off. If a downed seabird is detected, please follow DOFAW's recommended response protocol by visiting <https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/>

Permanent lighting also poses a risk of seabird attraction, and as such should be minimized or eliminated to protect seabird flyways and preserve the night sky. For illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i please visit <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>.

State-listed waterbirds such as ae'o or Hawaiian stilt (*Himantopus mexicanus knudseni*), 'alae ke'oke'o or Hawaiian coot (*Fulica alai*), 'alae 'ula or Hawaiian gallinule (*Gallinula chloropus sandvicensis*), koloa maoli or Hawaiian Duck (*Anas wyvilliana*), and nēnē or Hawaiian Goose (*Branta sandvicensis*) could potentially occur at or in the vicinity of the proposed project site. It is against State law to harm or harass these species. If any of these species are present during construction, all activities within 100 feet (30 meters) should cease and the bird or birds should not be approached. Work may continue after the bird or birds leave the area of their own accord. If a nest is discovered at any point, please contact the Kaua'i Branch DOFAW Office at (808) 274-3433 and establish a buffer zone around the nest.

The endemic pueo or Hawaiian Short-Eared Owl (*Asio flammeus sandwichensis*) could potentially nest in the project area. Pueo nest on the ground and active nests have been found year-round. Before any potential vegetative alteration, especially ground-based disturbance, we recommend that line transect surveys are conducted during crepuscular hours through the project area. If a pueo nest is discovered, a minimum buffer distance of 100 meters from the nest should be established until chicks are capable of flight.

DOFAW recommends that a botanical survey be conducted by a qualified botanist in all proposed affected areas prior to commencing work to determine if any rare or endangered plants are present in the project area. We recommend that the survey consists of a complete species list and is conducted during the wettest time of year when plants are more likely to be visible, especially in drier areas. If any listed species are found, please notify DOFAW at (808) 587-0166. For information on avoidance and minimization measures for plants, please refer to the following link: <https://www.fws.gov/media/plant-avoidance-and-minimization-measures-may-2023>

DOFAW recommends using native plant species for landscaping that are appropriate for the area; i.e., plants for which climate conditions are suitable for them to thrive, plants that historically occurred there, etc. Please do not plant invasive species. DOFAW also recommends referring to [www.plantpono.org](http://www.plantpono.org) for guidance on the selection and evaluation of landscaping plants and to determine the potential invasiveness of plants proposed for use in the project.

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain detrimental fungal pathogens (e.g., Rapid 'Ōhi'a Death, Coffee Leaf Rust), vertebrate and invertebrate pests (e.g., Coqui Frogs, Little Fire Ants, Coffee Berry Borer, etc.), or invasive plant parts (e.g., Barbados Gooseberry, False Kava, Giant Reed, etc.) that could harm our native species and ecosystems. We recommend consulting the Kaua'i Invasive Species Committee (KISC) at (808) 821-1490 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The invasive Coconut Rhinoceros Beetle (CRB) or *Oryctes rhinoceros* is found on the islands of O'ahu, Hawai'i Island, Maui and Kaua'i. On July 1, 2022, the Hawai'i Department of Agriculture (HDOA) approved Plant Quarantine Interim Rule 22-1. This rule restricts the movement of CRB-host material within or to and from the island of O'ahu, which is defined as the Quarantine Area. Regulated material (host material or host plants) is considered a risk for potential CRB infestation. Host material for the beetle specifically includes a) entire dead trees, b) mulch, compost, trimmings, fruit and vegetative scraps, and c) decaying stumps. CRB host plants include the live palm plants in the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms). When such material or these specific plants are moved there is a risk of spreading CRB because they may contain CRB in any life stage. For more information regarding CRB, please visit <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/>.

We recommend that Best Management Practices are employed during and after construction to contain any soils and sediment with the purpose of preventing damage to near-shore waters and marine ecosystems.

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 Kate Cullison, Protected Species Habitat Conservation Planning Coordinator via email at [katherine.cullison@hawaii.gov](mailto:katherine.cullison@hawaii.gov).

Sincerely,

*Lindsey Niemann*

LINDSEY NIEMANN  
Acting Wildlife Program Manager

JOSH GREEN, M.D.  
GOVERNOR  
KE KIA'ĀINA



EDWIN H. SNIFFEN  
DIRECTOR  
KA LUNA HO'OKELE

Deputy Directors  
Nā Hope Luna Ho'okele  
DREANALEE K. KALILI  
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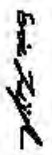
IN REPLY REFER TO:

**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'**  
**DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

HWY-K 4.250309

September 29, 2025

TO: MR. BRIAN J. NEILSON  
ADMINISTRATOR  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF AQUATIC RESOURCES

FROM: ERIC FUJIKAWA   
KAUAI DISTRICT ENGINEER

SUBJECT: PRECONSULTATION (PRE-ASSESSMENT) FOR THE HRS 343  
ENVIRONMENTAL ASSESSMENT  
KUHIU HIGHWAY SHOULDER IMPROVEMENTS  
ROUTE 560 IN THE VICINITY OF HANAIEI BRIDGE  
DISTRICT OF HANAIEI, COUNTY OF KAUAI, STATE OF HAWAII  
TAX MAP KEYS (4) 5-4-004:999 AND (4) 5-4-004:030

The Hawaii Department of Transportation (HDOT), Highways Division has received your comments during the preconsultation process for the HRS 343 Environmental Assessment (EA) as required for the subject project. As required we are providing you with responses to your comments.

### Comments

The best management practices to minimize the potential for erosion, siltation, pollution, turbidity and degradation of the aquatic environment are included in the Preferred Alternative, *Section 2.1 Preferred Alternative*. The recommended best management practices will be added to the best management practices in the Preferred Alternative. The impact analysis is presented in the Draft EA, *Section 3.5 Water Quality*.

We will minimize to the extent possible the impacts to the riverbed, by using sheet-piles which a minimal footprint and driven into the riverbed. The sheet-piles and vegetated armored riverbank will serve as a permanent best management measure to prevent erosion while stabilizing the riverbank.

MR. BRIAN J. NEILSON  
September 29, 2025  
Page 2

HWY-K 4.250309

In addition, a small wetland on the current roadway shoulder will be protected from construction impacts with a temporary construction fence.

If you have any questions, please contact Eric Fujikawa, Highways Kauai District Engineer at (808) 241-3015 or by email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

#### Attachments

c: Federal Highway Administration

JOSH GREEN, M.D.  
GOVERNOR  
KE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII  
DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

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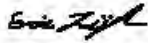
IN REPLY REFER TO:

HWY-K 4.250308

September 29, 2025

TO: DAWN N.S. CHANG, CHAIRPERSON  
DEPARTMENT OF LAND AND NATURAL RESOURCES

ATTENTION: DAVID SMITH, ADMINISTRATOR  
DIVISION OF FORESTRY AND WILDLIFE

FROM: ERIC FUJIKAWA   
KAUAI DISTRICT ENGINEER

SUBJECT: PRECONSULTATION (PRE-ASSESSMENT) FOR THE HRS 343  
ENVIRONMENTAL ASSESSMENT  
KUHIU HIGHWAY SHOULDER IMPROVEMENTS  
ROUTE 560 IN THE VICINITY OF HANALEI BRIDGE  
DISTRICT OF HANALEI, COUNTY OF KAUAI, STATE OF HAWAII  
TAX MAP KEYS (4) 5-4-004:999 AND (4) 5-4-004:030

The Hawaii Department of Transportation (HDOT), Highways Division has received your comments during the preconsultation process for the HRS 343 Environmental Assessment (EA) as required for the subject project. As required, we are providing you with responses to your comments.

### **Hawaiian Hoary Bat**

The best management practices for the Hawaiian Hoary Bat shall be included in the construction documents as part of the Preferred Alternative. The impact analysis is presented in the Draft EA, *Section 3.7.1.2 Fauna*.

### **Seabirds**

The best management practices for the seabirds shall be included in the construction documents as part of the Preferred Alternative. The impact analysis is presented in the Draft EA, *Section 3.7.1.2 Fauna*.

### **Endangered Wildlife**

The best management practices for the endangered species shall be included in the construction documents as part of the Preferred Alternative. The impact analysis is presented in the Draft EA, *Section 3.7.1.2 Fauna*.

### **Pueo (Hawaiian Short-Eared Owl)**

The best management practices related to the *Pueo* shall be included in the construction documents as part of the Preferred Alternative. The impact analysis is presented in the Draft EA, *Section 3.7.1.2 Fauna*.

### **Flora Study**

The flora study was conducted by a qualified biologist and the survey is summarized in the Draft EA, *Section 3.7.1.1 Flora*. In addition, the survey is presented in the Draft EA – *Appendix C Natural Resources Study*.

### **Landscaping**

The use of native vegetation is part of the Preferred Alternative as stated in the Draft EA, *Section 2.1 Preferred Alternative to the Proposed Action*.

### **Invasive Species**

The mitigation measures presented in your comments are summarized in the Draft EA, *Section 3.10 Hazardous Materials, Pollution Prevention, and Solid Waste*.

### **Water Quality**

The Preferred Alternative will have BMPs for runoff as stated in the Draft EA, *Section 2.1 Preferred Alternative to the Proposed Action* and in *Section 3.5 Water Quality*.

If you have any questions, please contact Eric Fujikawa, Highways Kauai District Engineer at (808) 241-3015 or by email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

Attachments

c: Federal Highway Administration



# ENGINEERING DIVISION

## DEPARTMENT OF PUBLIC WORKS

TROY TANIGAWA, P.E., COUNTY ENGINEER

BOYD GAYAGAS, DEPUTY COUNTY ENGINEER



DEREK S.K. KAWAKAMI, MAYOR  
REIKO MATSUYAMA, MANAGING DIRECTOR

May 9, 2024

State of Hawai'i  
Department of Transportation  
869 Punchbowl Street  
Honolulu, HI 96813-5097  
Attn: Eric Fujikawa ([eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov))

Subject: Chapter 343 Pre-Consultation Request  
Kūhiō Highway Shoulder Improvements, Vicinity of Hanalei Bridge  
Project No. 560A-02-21  
TMK: (4) 5-4-004:999; (4) 5-4-004:030

Dear Mr. Fujikawa:

We offer the following comments:

1. The applicant shall comply with all provisions of the Kaua'i County Sediment and Erosion Control Ordinance (Ordinance No. 808) to safeguard public health, safety, and welfare, to protect property, and to control soil erosion and sedimentation. The permit requirements of the ordinance are exempted per Section 22-7.6 for work "...in an isolated, self-contained government-controlled area." Assuming that the Hawai'i Department of Transportation (HDOT), Highways Division has active construction inspection ensuring compliance with the ordinance, we consider HDOT-Highways projects exempt from obtaining a permit .
2. During construction, best management practices (BMPs) shall be incorporated to the maximum extent practicable to prevent damage by sedimentation, erosion, or dust to watercourses, natural areas, and other properties. The permittee and the property owner shall be responsible for ensuring that BMPs are satisfactorily implemented at all times.
3. Based on Panel 1500020055E dated September 16, 2005, the proposed improvements are located within Flood Zone AEF, which is the regulatory Floodway within the Special Flood Hazard Area. The proposed improvements must comply with the County of Kauai's Floodplain Management Ordinance No. 831. Please note the requirements in Section 15-1.5 (b), which states the following:

*(b) Floodway. The floodway, identified on the FIRMs, is the watercourse reserved to discharge the base flood.*

*(1) Development Standard. Encroachments, including fill, new construction, repetitive loss structures, and substantial improvements of structures, are prohibited in the floodway unless certified by a registered professional civil engineer, with supporting data that the encroachment will not cause any increase in base flood elevations during the occurrence of the base flood discharge.*


*(2) Construction Standards. If permitted pursuant to Paragraph (1) of this Subsection, all new construction, repetitive loss structures, and substantial improvements shall comply with all applicable requirements prescribed in Subsection (a) of this Section and Section 15-1.6.*



*(3) Certification for Development. A registered professional civil engineer shall certify that the encroachment, including fill, new construction, repetitive loss structures, or substantial improvement will not result in any increase in base flood elevations during the occurrence of the base flood discharges.*

Should you have any questions, please contact Bryan Wienand at [bwienand@kauai.gov](mailto:bwienand@kauai.gov) or (808) 241-4896.

Sincerely,



Digitally signed by Michael  
Moule  
Date: 2024.05.09 17:00:57 -10'00'

Michael Moule, P.E.  
Chief, Engineering Division

BW

cc: Regulatory and Construction Compliance Section

JOSH GREEN, M.D.  
GOVERNOR  
KE KIA'ĀINA



**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I**  
**DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU**  
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EDWIN H. SNIFFEN  
DIRECTOR  
KA LUNA HO'OKELE

Deputy Directors  
Nā Hope Luna Ho'okele  
DREANALEE K. KALILI  
TAMMY L. LEE  
CURT T. OTAGURO  
ROBIN K. SHISHIDO

IN REPLY REFER TO:

**HWY-K 4.250359**

November 25, 2025

**VIA EMAIL:** pwengineering@kauai.gov

Mr. Michael Moule, P.E.  
Chief, Engineering Division  
County of Kauai  
Department of Public Works  
4444 Rice Street, Suite 275  
Lihue, Hawaii 96766

**SUBJECT:** Chapter 343 Pre-Consultation Request  
Kuhio Highway Shoulder Improvements, Vicinity of Hanalei Bridge  
Project No. 560A-02-21  
TMK: (4) 5-4-004:999; (4) 5-4-004:030

Dear Mr. Moule:

Thank you for your comments during the pre-consultation process of the Draft Environmental Assessment (EA) for the Kuhio Highway Shoulder Improvement project, near Hanalei Bridge, in your letter dated May 9, 2024. The following are responses to your comments.

1. Comply with all provisions of the Kauai County Sediment and Erosion Control Ordinance (Ordinance No.808)

The Preferred Alternative has an Erosion and Sediment Control Plan and is incorporated into the construction documents. The Preferred Alternative is presented in the Draft EA, *Section 2.1 Preferred Alternative to the Proposed Action*.

2. Construction - best management practices (BMPs)

The Preferred Alternative shall have BMPs during the construction phase. The Preferred Alternative is presented in the Draft EA, *Section 2.1 Preferred Alternative to the Proposed Action*.

Mr. Michael Moule  
November 25, 2025  
Page 2

HWY-K 4.250359

### 3. Flood Zone and Certification of Development

The flood zone impacts are discussed in the Draft EA, *Section 3.9 Floodplains*.

Hawaii Department of Transportation has provided the No-Rise Certification to the County of Kauai, Regulatory and Construction Section. The Certification was accepted on November 27, 2024, by email from Bryan Wienand.

If you have any questions, please contact Eric Fujikawa, Highways Kauai District Engineer at (808) 241-3015 or by email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov).

Sincerely,



ERIC I. FUJIKAWA, P.E.  
District Engineer

# APPENDIX B

## DRAFT ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST



**APPENDIX B**  
**MAILING LIST FOR DRAFT ENVIRONMENTAL ASSESSMENT**

**FEDERAL**

Department of Agriculture, Natural Resources Conservation Service, Pacific Islands Area State

Department of the Army, Pacific Ocean Division, U.S. Army Corps of Engineers

Department of the Army, Engineering District Honolulu, Regulatory Branch

Department of Commerce, National Marine Fisheries Service, Pacific Islands Regional Office

U.S. Department of Interior, Fish & Wildlife Service

U.S. Department of Interior, Pacific Island Ecosystem Research Center, U. S. Geological  
Survey-Biological Resources Division

U.S. Environmental Protection Agency, Pacific Island Contact Office

US EPA, Region 9

**STATE AGENCIES**

Department of Agriculture

Department of Accounting and General Services

Department of Business, Economic Development & Tourism

Department of Business, Economic Development & Tourism, Office of Planning and Sustainable  
Development

Department of Business, Economic Development & Tourism, Strategic Industries Division /  
Hawaii State Energy Office

Department of Defense

Department of Hawaiian Home Lands

Department of Health

Department of Health, Environmental Health Administration

Department of Land & Natural Resources

Department of Land and Natural Resources, State Historic Preservation Division

Department of Transportation

Department of Transportation, Harbors

Department of Transportation, Airports

Department of Transportation, Statewide Transportation Planning Office Hawaii

State Library, Hawaii Documents Center

Hawaii State Library, Princeville Branch Library

Legislative Reference Bureau Library

Office of Hawaiian Affairs

University of Hawaii, Environmental Center

## **COUNTY OF KAUAI**

Department of Water

Emergency Management Agency

Fire Department

Planning Department

Police Department

Public Works Department

Transportation Agency

## **ELECTED AND OTHER OFFICIALS**

Hawaii State Legislature, Mr. Ronald Kouchi, Senator, District 8



Hawaii State Legislature, Mr. Derek Kawakami, Representative, District 14

Kauai County, Office of the Mayor

Kauai County Councilmembers (email to all Councilmembers)

### **ORGANIZATIONS AND INDIVIDUALS**

Ahahui Kiwila Hawaii O Moikeha

Hanalei Garden Farms Condo Association

Hanalei Hawaiian Civic Clubs

Hanalei Land Company

Hanalei Watershed Hui

Hawaiian Telcom

Kaieie Foundation

Kauai Island Utility Cooperative

Konohiki Restoration Project

Mahamoku Ohana Council

Spectrum

Powers Ohana

Waipa Foundation

Cowden, Charlie

Cowden, Claudia

Cowden, Felicia

Cummings, Sherri

Dixon, Berlinda

Ewald, Bruno

Luff, Chris

Luff, Cynthia

Manoogian, D.

Nishimoto, Bryson

Robeson, Barbara

Ross, Luca

Sheehan, Juliette

Sheehan, Michael

Stewart, David

Yokotake, Sherrie

# APPENDIX C

## NATURAL RESOURCES ASSESSMENT

BY AECOS, INC.



**A natural resources assessment for  
the Hanalei River streambank stabilization  
Hanalei, Kaua'i, Hawai'i**

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45-939 Kamehameha Highway  
Room 104  
Kāne'ohe, Hawai'i 96744

June 10, 2022

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# A natural resources assessment for the Hanalei River streambank stabilization Hanalei, Kauaʻi, Hawaiʻi

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June 10, 2022

AECOS No. 1699

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## Introduction

The Hawaiʻi Department of Transportation, Highways Division, Kauaʻi District (HDOT-K) proposes to stabilize approximately 100 m (300 ft) of the left bank of the Hanalei River (“Project”) adjacent to Kuhio Highway (Route 560) in the vicinity of mile 1.7 (TMKs: (4) 5-4-004:999 and 030; see Figure 1). AECOS Inc. was contracted by EKNA to undertake natural resources surveys and prepare this report of findings<sup>1</sup>. The surveys included aquatic and terrestrial flora and fauna surveys, water quality, delineation of federal jurisdictional waters, and an Essential Fish Habitat Assessment (EFHA).

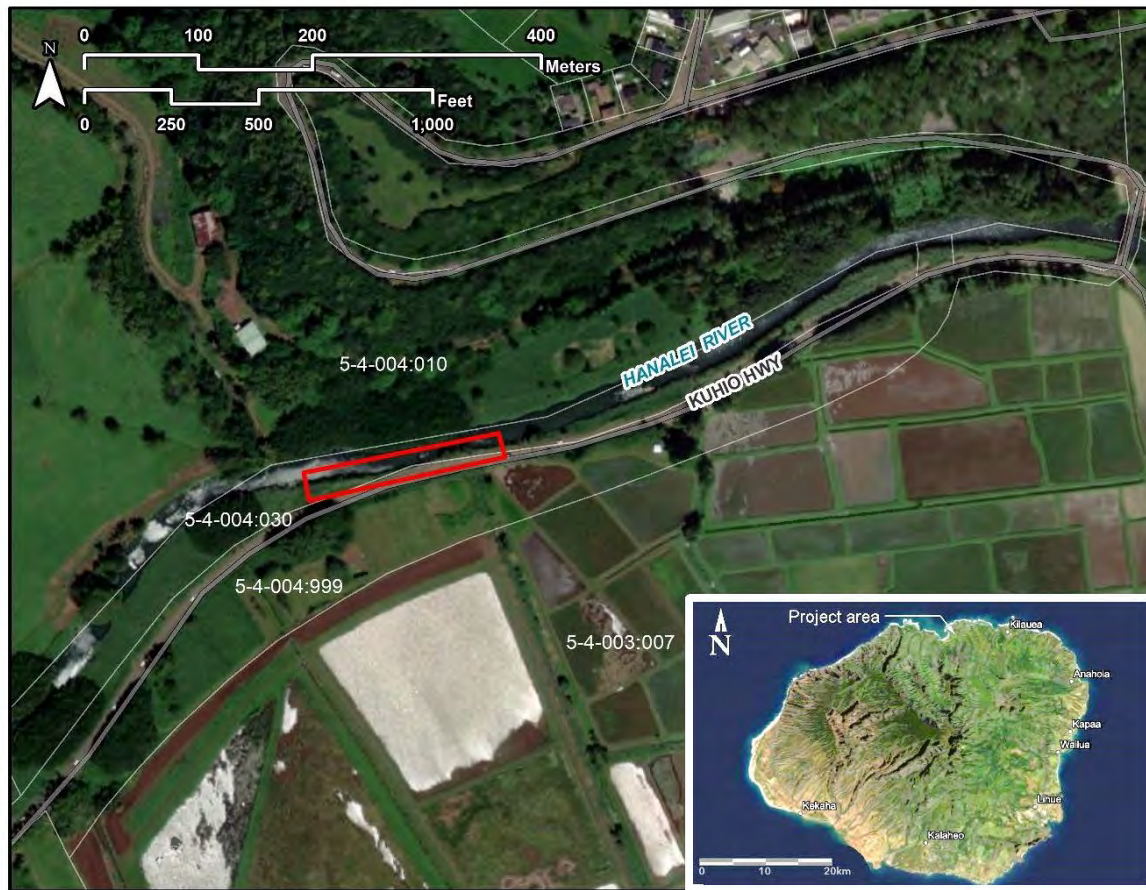
## Site Description

Hanalei River (State ID No. 21019) is a perennial<sup>2</sup> stream that arises approximately 1,560 m (5,130 ft) above sea level (ASL). The gradient of the upper reach is steep, but near the coast the stream crosses a broad plain, resulting in a long estuary prior to discharging into Hanalei Bay. At approximately 123 km (76.5 mi) in length, this fourth-order stream is one of the longest in Hawaiʻi. Total area of the Hanalei watershed is estimated at 61.9 km<sup>2</sup> (23.9 mi<sup>2</sup>; Parham et al., 2008). Hanalei stream drains the northeastern slope of Mt. Waiʻaleʻale, known as one of the wettest places on Earth.

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<sup>1</sup> This report is intended to become part of the public record.

<sup>2</sup> A perennial stream has year-round, continuous flow in at least some reach of the stream; flow need not be continuous from upper reaches to the sea in all seasons.



**Figure 1. Hanalei River Bank Stabilization Project (outlined in red).**

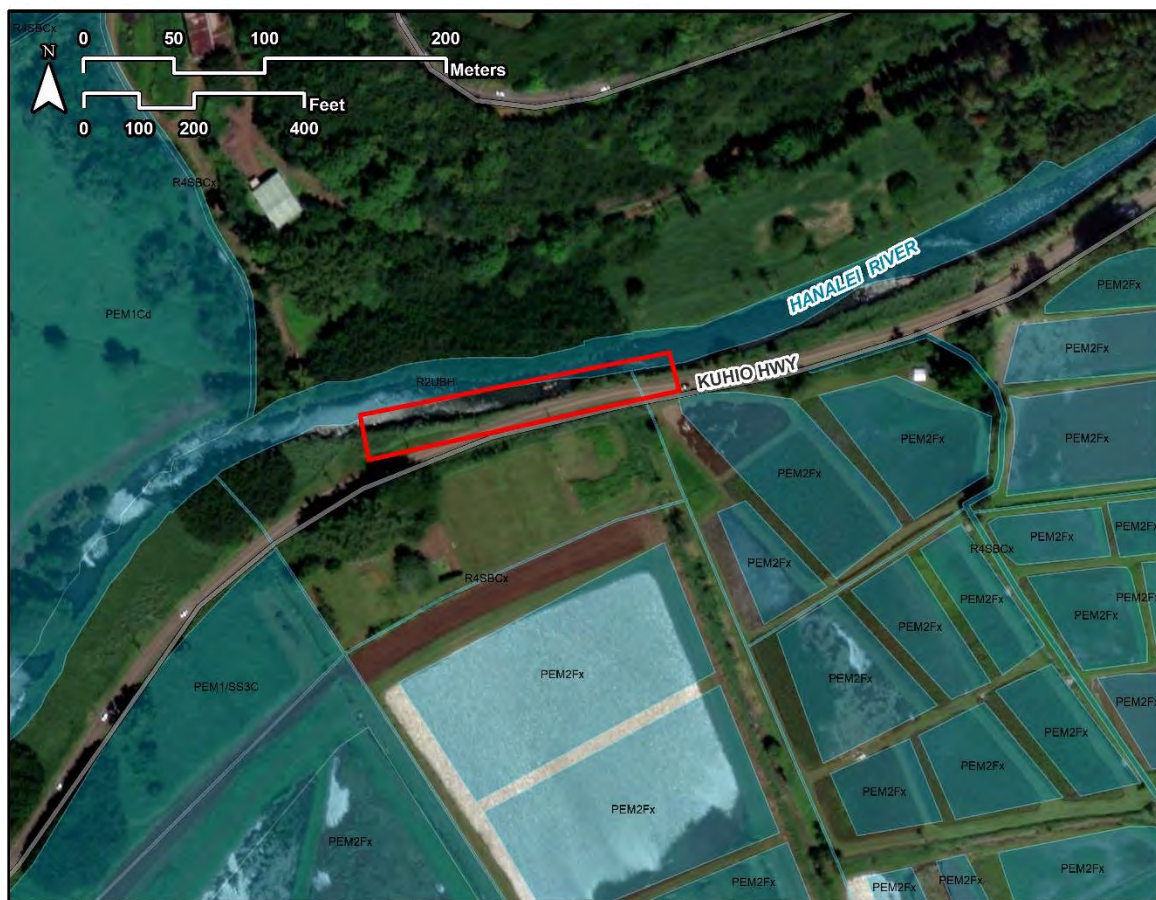
According to the Hawai'i Stream Assessment (HCPSU, 1990), Hanalei River is a candidate stream for protection based upon its diversity and quality of resources. That document also provides information that the stream is ranked as having outstanding aquatic, riparian, cultural, and recreation resources. Hawai'i Department of Land and Natural Resources–Division of Aquatic Resources (HDLNR–DAR) assigns Hanalei watershed an overall rating of 8 out of 10 (Parham et al., 2008).

In 1998, Hanalei River was designated as an American Heritage River (The White House, 1998). The American Heritage River Initiative was established to assist river communities access to federal programs to protect natural resources and the environment, undertake economic revitalization measures, and preserve local culture (Clinton, 1997). The Hanalei Watershed Hui, formed in response to this designation, is responsible for coordinating various activities to care for the Hanalei Watershed.



Since its designation as an American Heritage River, numerous studies have been conducted in the river and in Hanalei Bay, many summarized in the proceedings of a 2007 workshop (Field, et al., 2007). Included are reports on water quality, sediment loading, coral reef communities, riparian vegetation, and other scientific and management aspects of the watershed.

The U.S. Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) is a nationwide geospatial dataset of wetlands and other surface hydrology features (USFWS, nd-a). The NWI shows Hanalei River in the Project area as a lower reach, perennial, permanently flooded river with an unconsolidated bottom (R2UBH; Figure 2). The NWI does not show any wetlands at the Project site (Figure 2). From Hanalei Bridge (Fig. 1) to Hanalei Town, Kuhio Highway is within a floodway of the River (HDLNR, 2019).



**Figure 2. Project area and NWI (hydrology) geospatial data overlay.**

The U.S. Dept. of Agriculture, Natural Resources Conservation Service (USDA-NRCS) web soil survey (USDA-NRCS, 2021) maps the soil in the Project area as



Hanalei silty clay, deep water table, 0 - 6% slopes (HrB), which is on the USDA-NRCS Soil Data Access *Hydric Soils List* (USDA-NRCS, nd) for Kaua'i County. The Hanalei soil series is classified as a Typic Endoaquept (USDA, 2012); HrB forms in alluvium and frequently ponded for long durations (USDA-NRCS, nd).

## Climate

Hanalei has a wet climate. The *Rainfall Atlas of Hawai'i* (Giambelluca et al., 2013) approximates the average annual rainfall in the Project area as 1,996 mm (79 in). Rainfall is seasonal, with the "official" wet season extending from November through April and the dry season from May through October. The U.S. Climate Normals dataset reports average annual rainfall at the nearest climate normal station ("Princeville Ranch 1117, H") as 1,909 mm (75 in; NOAA-NCEI, 2021), also with a seasonal distribution. This statistic is based on a 30-year average (1991 to 2020).

## Jurisdictional Waters

Waters of the U.S. (also called "jurisdictional waters") are surface waters that come under federal jurisdiction as authorized by the Clean Water Act (CWA) and the Rivers and Harbors Act (RHA). Authority over these waters is granted to various federal agencies, including the U.S. Environmental Protection Agency (USEPA), with the U.S. Army Corps of Engineers (USACE) having permit authority for actions that impact jurisdictional waters. Jurisdictional waters include all tidal waters and a subset of streams, lakes, reservoirs, and wetlands.

Because ecosystem boundaries tend to be gradients in nature, defining the limits of jurisdiction is somewhat of a political decision. Supreme Court cases (including *Rapanos v. United States*, *SWANCC v. USACE*, and *Carabell v. United States*), a guidance memorandum (USEPA and DA, 2008), and recent published rules (USACE and USEPA, 2015; 2020) have variously defined waters of the U.S.; however, on August 20, 2021, a District Court order remanded and vacated the most recent definition of waters of the U.S. (US District Court for AZ, 2021) and, until a new rule is published, the definition reverts back to the pre-2015 regulatory language, decided upon by the Supreme Court and described in a guidance memorandum (USEPA and DA, 2008). The USACE and USEPA initiated another round of rulemaking by publishing a proposed new rule to revise the definition of waters of the U.S. (USACE and USEPA, 2021), so the definition is likely to continue to remain in flux for a while longer. Our jurisdictional assessment presented herein is based on best professional judgement, but the USACE must concur for our findings to become official determinations of federal jurisdiction. If a feature is determined by the USACE to be jurisdictional, certain

activities would require a permit from that agency before undertaking work within the boundaries of that feature.

As applicable to the Project, jurisdictional waters include: (1) tributaries to tidal waters and (2) waters adjacent to tributaries, including wetlands, impoundments, and similar waters. Although Hanalei Stream estuary is brackish up to the highway bridge, the tidal amplitude is negligible here. Within the Project area, the greatest variation in water level is due to rain events, so jurisdictional limits extend up to at least the “ordinary high water mark” (OHWM). If a wetland is present adjacent to an OHWM, jurisdiction extends to include the wetland. Adjacent means bordering, contiguous, or neighboring. If a wetland is adjacent, CWA jurisdiction extends to the wetland/upland boundary.

OHWM is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. (USACE, 1977) Other physical indicators of flow may include wracking, water staining, sediment sorting, and scour (USEPA and DA, 2008).

Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar “wet” features (USACE, 1977).

## Methods

Natural resources surveys were conducted January 6, 2022, covering the Project site and the river mouth at Hanalei Bay. The surveys included an assessment of jurisdictional waters (presence and boundaries), water quality, and aquatic and terrestrial flora and fauna, with particular attention paid to sensitive biological resources and environments. Sensitive biota includes species currently listed by the Endangered Species Act of 1973 as amended (ESA; see USFWS, 2021a), or by state administrative rule (HDLNR, 1998, 2015), or a biological community comprising native plants and animals that may or may not be under any specific threat of extirpation, but which would be regarded as special and worthy of preservation.

## Jurisdictional Waters Survey

Biologists assessed potential extent of federal jurisdiction of Hanalei River. Prior to the field surveys, we reviewed literature and GIS data: results of previous surveys conducted by *AECOS* for Projects in the Project vicinity (*AECOS*, 1995; 1998; 2012; 2013a, 2013b); climate data, including recent rainfall (NOAA-NWS, 2022a; 2022b); mapped soil types (USDA-NRCS, 2021); surface waters and wetlands identified in NWI (USFWS, nd-a); and mapped flood zones (HDLNR, 2019). We confirmed Hanalei River has a surface connection to the ocean and flow is perennial.

### ***Tributaries***

We delineated OHWM on the left bank of Hanalei River by marking six locations along the stream channel with colored flagging tape and by recording the geospatial position of each flag using a Trimble Geo7X, capable of sub-meter accuracy. The resulting shapefile was processed with GPS Pathfinder, including differential correction, and exported as ArcMap shapefiles using a projected coordinate system of NAD 1983 UTM Zone 5N. A land survey team from ATA recorded the positions of our flags in order to include them on Project maps. We took photographs at each location to document the OHWM characteristics and illustrate the environment.

### ***Wetlands***

We prepared a wetland data determination form for a sampling point (SP-1) at the *makai* end of the Project area—the only area available between the stream bank and the highway. Elsewhere in the Project area, the stream bank directly abuts the highway verge.

## Water Quality Survey

To characterize Hanalei River at the Project site, *AECOS* biologists established three water quality stations in the river and one station in an irrigation ditch that is tributary to Hanalei River (Figure 3a) in the Project area. We also established three stations at the mouth of the river in Hanalei Bay to assess the influence of the river on the bay and for the EFHA (Figure 3b). At each station, we made *in situ* field measurements of temperature, conductivity, salinity, and dissolved oxygen (DO). We collected water samples from just below the water surface, analyzed pH and turbidity in the field, and placed the samples on ice for delivery to the *AECOS* Laboratory (*AECOS* Log No. 44459) in Kāneʻohe, Oʻahu. In the laboratory, analyses of total suspended solids (TSS), silicates, chlorophyll *a*, and

nutrients were made. Table 2 lists the instruments and analytical methods used in the field and laboratory to analyze the water samples.

**Table 2. Analytical methods used for water quality analysis.**

<b>Analysis</b>	<b>Method</b>	<b>Reference</b>
Temperature	thermister calibrated to NBS. Cert. thermometer/ SM 2550 B	SM (1998)
Conductivity (river samples only)	SM 2510-B	SM (1998)
Salinity (Sta. B1)	bench salinometer	Grasshoff et al. (2009)
Salinity	SM 2550B	SM (2017)
pH	SM 4500 H+	SM (2017)
Dissolved Oxygen	SM 4500-O G	SM (2017)
Turbidity	EPA 180.1 Rev 2.0	USEPA (1993)
Total Suspended Solids	SM 2540 D	SM (2017)
Ammonia	EPA 349	USEPA (1997a)
Nitrate + Nitrite	EPA 353.2	USEPA (1997b)
Total Nitrogen	ASTM D5176-08	ASTM (2015)
Orthophosphate	EPA 365.5	USGS (2003), USEPA (1997b)
Total Phosphorus	EPA 365.5 (Persulfate digestion)	USGS (2003), USEPA (1997b)
Silicates	EPA 366	USEPA (1997c)
Chlorophyll a	SM10200H(M)	SM (2017)

To determine if the water column of Hanalei River is stratified (layered due to differences in density caused by differences in water temperature or salinity or both), we measured temperature, conductivity, and salinity with the YSI probe at three depths in the water column (surface, middle, and bottom) at a single water quality station (Sta. S3, see Fig. 3a).

## Botanical Survey

For the botanical survey, an *AECOS* biologist conducted a wandering pedestrian survey of the Project area. An outline of the Project site was loaded onto a handheld GNSS unit (Trimble Geo7X) to serve as a guide to the survey area. The GNSS unit recorded the progress tracks of the biologist, providing real time feedback on location and adequacy of coverage of the pedestrian survey. Plant species were identified as they were encountered, and notations used to develop



**Figure 3a (top). Water quality sampling locations in Hanalei River.**  
**Figure 3b (bottom). Water quality sampling locations in Hanalei Bay.**

a qualitative sense of abundance. Any plant not immediately recognized during the survey was photographed and/or a representative feature (flower, fruit) collected for later identification at the laboratory.

Plant names used in the report follow *Manual of the Flowering Plants of Hawai'i* (Wagner, Herbst, & Sohmer, 1999) for native and naturalized flowering plants,

*Hawai'i's Ferns and Fern Allies* (Palmer, 2017) for fern and fern allies, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for crop and ornamental plants. More recent name changes for naturalized plants follow Imada (2019).

## Fauna Survey

### ***Aquatic Fauna***

On January 6, 2022, water within the segment of Hanalei River at the Project area was too turbid for snorkeling and too deep for wading. Biologists limited the aquatic survey to making visual observations from the left bank, noting species as they were encountered and providing estimates to relative abundance (e.g. rare, common, or abundant). Species identifications follow *Hawai'i's Native and Exotic Freshwater Animals* (Yamamoto and Tagawa, 2000) and nomenclature follows the *Integrated Taxonomic Information System* (ITIS, 2022). To supplement these observations, biologists reviewed records from a previous AECOS survey in Hanalei River (AECOS, 2012). Species reported by this previous survey are included in the species listing as historical records.

### ***Avian Survey***

A survey of birds at the Project area was conducted in the morning hours of January 6, 2022. A single 6-minute avian point-count survey was made from the Project site. Birds were identified to species by visual observation, aided by Leica 8 X 42 binoculars, and by listening for vocalizations. Any species observed in the area outside of the timed count at the point-count station were recorded as incidental observations. An additional 30-minute time dependent waterbird count was made along Hanalei River fronting the Project area. Time not spent counting was used to search for additional species and habitats.

The avian phylogenetic order and nomenclature used in this report follows the AOS *Check-List of North and Middle American Birds* (Chesser et al., 2020) and the 62<sup>nd</sup> *Supplement to the Check-list of North American Birds* (Chesser et al., 2021).

### ***Mammalian Survey***

The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all terrestrial vertebrate mammalian species detected at the Project site. Mammal scientific names follow *Wilson & Reeder's Mammal Species of the World* (Third Edition; Wilson and Reeder, 2005).

## Essential Fish Habitat Survey

Biologists conducted a biological reconnaissance survey of marine resources in the Project vicinity. The survey area included Hanalei stream mouth and the nearshore waters out to approximately 60 m (197 ft) from the shore. The survey began at 1345, 107 minutes after a predicted low tide of +0.05 m (+0.18 ft) relative to mean lower low water (MLLW: Hanalei Bay ID 1611683; NOAA-NOS, 2022). Underwater visibility at the stream mouth was poor (approximately 0.6 m or 2 ft). Maximum depth surveyed was on the order of 2 m (6 ft). Marine algae, fishes, and macroinvertebrates were identified in the field.

## Results

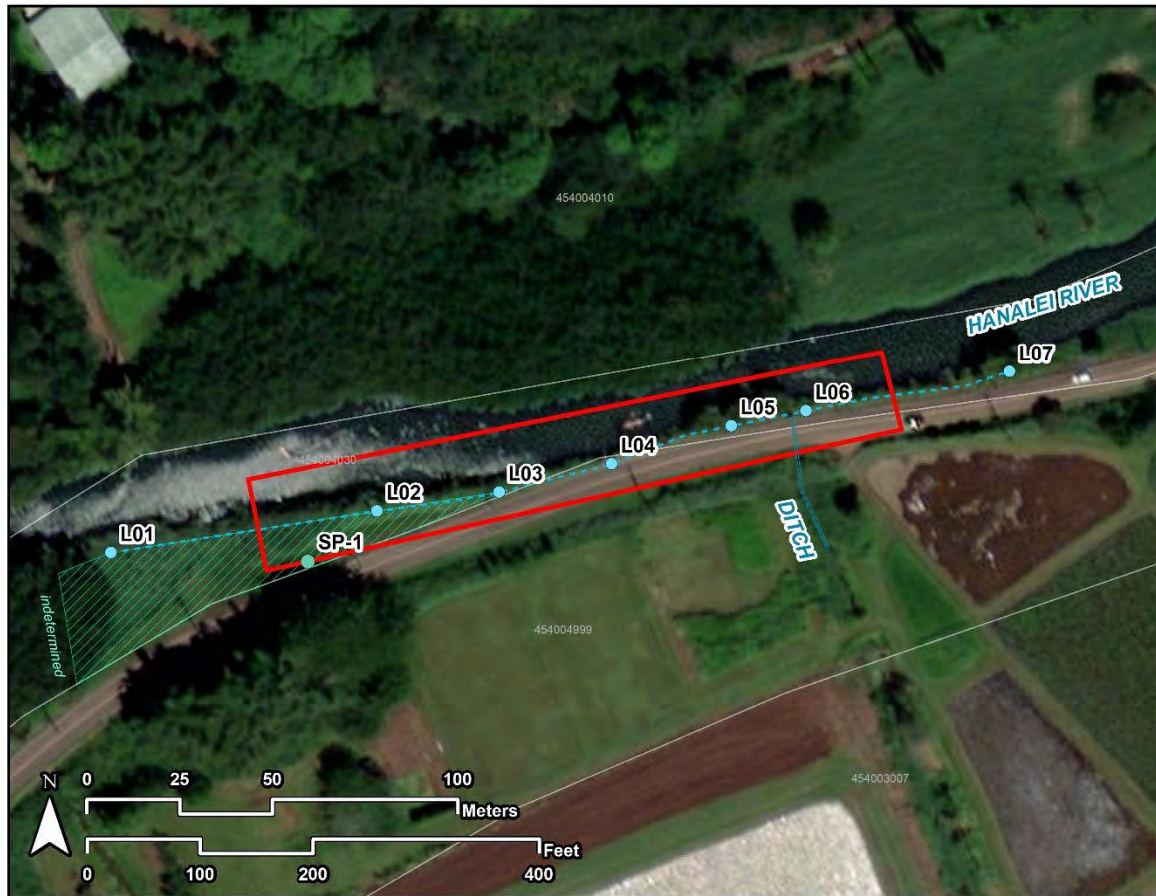
### Jurisdictional Waters

The nearest National Oceanographic and Atmospheric Administration–National Weather Service (NOAA–NWS) rain gage, Hanalei (HNIH1), recorded a total of 685.80 mm (27.00 in) of rainfall in the three months preceding our jurisdictional waters survey in January 2022 (NOAA–NWS, 2022a). Total rainfall in that three-month period (October 2021 through December 2021) was 110% of the moving 30-year average rainfall for that gage. Climate Normals from the nearest NOAA–NCEI gage (Princeville Ranch 1117) for the same three-month period is 556.01 mm (21.89 in). No rain was recorded at HNIH1 the 24 hours before nor during our survey (NOAA–NWS, 2021b). Hydrologic conditions in Hanalei during the survey can be considered within parameters of a ‘typical year’ for a determination of federal jurisdictional waters.

### *Tributaries*

Figure 4 depicts the OHWM of the left bank of Hanalei River that we marked in the field on January 6, 2022. Within the Project area, the left bank of Hanalei River is steep and the OHWM is at the top-of-bank, which is also the bankfull stage—the point at which rising water begins to overflow onto the adjacent floodplain. At the *makai* (downstream) end of the Project area, the OHWM is adjacent to a wetland (discussed below). At the *mauka* (upstream) end of the Project area, the OHWM is adjacent to the highway. Photographs taken at each flag document the OHWM characteristics and illustrate the environment. These photographs are included as Attachment A.





**Figure 4. OHWM (blue dotted line) and wetland boundary (teal hash) as delineated by AECOS in the field.**

### ***Wetlands***

At the *makai* end of the Project area, a wetland extends from the OHWM to the edge of the highway. As shown in Fig. 4, this wetland lies beyond the Project site to the west. Also shown in the figure is SP-1. The wetland is in the active floodplain and, within the Project area, meets the hydric soil and wetland hydrology criteria due to a thin muck surface. Here, the roadside verge is mowed regularly and, although vegetation covered only around half of the sampling plot, the plant community met the prevalence indicator and is considered to be hydrophytic. West of the Project area, wetland features are stronger: hydrophytic plants (e.g., *Talipariti tiliaceum*, *Cyperus javanicus*) dominate the community, the layer of muck is deep and depleted, and surface water is present. To the east of the wetland in the Project area, the OHWM abuts the highway. The data form and photographs for SP-1 are included as Attachment B.

## Water Quality

Results of the January 6, 2022 water quality sampling event in Hanalei River are presented in Tables 2a and 2b and results from Hanalei Bay are presented in Table 3. Temperature, conductivity, and salinity values were identical throughout the water column at Sta. S3 (Table 2a), indicating the river was not stratified in the Project area at the time.

**Table 2a. Water column properties at Sta. S3 in Hanalei River.**

Station	Temp. (°C)	Conductivity (µmhos/cm)	Salinity (psu)
Surface	20.4	98.3	<1.0
Mid	20.4	98.3	<1.0
Near bottom	20.4	98.3	<1.0

**Table 2b. Water quality in Hanalei River for samples collected January 6, 2022.**

Station	Temp. (°C)	Conductivity (µmhos/cm)	Salinity (psu)	pH	DO sat. (mg/L)
S3	20.5	98.8	<1.0	6.94	7.05
D1	22.3	58.6	<1.0	7.00	4.76
S2	21.9	103	<1.0	6.98	5.90
S1	21.8	47.3	<1.0	7.10	6.89
Station	DO sat. (%)	Turbidity (ntu)	TSS (mg/L)	NH <sub>3</sub> (µg N/L)	NO <sub>3</sub> +NO <sub>2</sub> (µg N/L)
S3	78	4.62	3.8	16	40
D1	54	21.0	24	65	43
S2	67	7.29	7.7	27	40
S1	78	6.26	6.3	19	40
Station	Total N (µg N/L)	PO <sub>4</sub> (µg P/L)	Total P (µg P/L)	Chl a (µg/L)	Silicates (µg/L)
S3	94	11	30	0.37	8040
D1	194	16	64	2.84	7890
S2	124	14	15	0.62	8160
S1	144	15	56	0.41	7940

**Table 3. Water quality in Hanalei Bay for samples collected January 6, 2022.**

Station	Temp. (°C)	Salinity (ppt)	pH	DO (mg/L)	DO sat. (%)
B1	24.4	35.10	8.09	7.30	106
B2	22.8	6.19	8.12	6.29	76
B3	24.5	29.76	7.83	5.66	80
Station	Turbidity (ntu)	TSS (mg/L)	NH <sub>3</sub> (µg N/L)	NO <sub>3</sub> +NO <sub>2</sub> (µg N/L)	Total N (µg N/L)
B1	4.24	8.1	<5	2	86
B2	5.12	5.4	25	21	103
B3	8.42	25.6	8	9	114
Station	PO <sub>4</sub> (µg P/L)	Total P (µg P/L)	Chl <i>a</i> (µg/L)	Silicates (µg/L)	
B1	29	31	0.39	68	
B2	11	12	0.56	7100	
B3	28	29	0.78	813	

Results from the January 6, 2022 event indicate little longitudinal difference in water quality throughout the Project area (Table 2b), although particulates and nutrients are lowest at Sta. S3, upstream of the ditch outlet into the river. Turbidity, TSS, and all nutrient moieties are elevated in the ditch water (Sta. D1) compared to the river stations and the results suggest outflow from the ditch may be influencing results at stations downstream (S2 and S3) from the ditch outlet.

Most water quality parameters measured directly off the mouth of the Hanalei River (Sta. B2; Table 3) are decidedly more brackish than at stations located to the north (Sta. B1) and south (Sta. B3). Temperature is slightly lower, salinity is much lower, pH is slightly higher and DO is slightly lower. At Sta. B2, turbidity is higher but TSS is lower; all nutrient moieties except phosphates and total N are higher, and silicates are much higher.

At the marine stations (Stas. B1 and B3), salinity is lower than would be expected for ocean water off Kaua'i, but is most likely the result of nearshore mixing of freshwater discharged from Hanalei River. pH is just above 8.00 (slightly low for seawater) at Sta. B1 and just below 8.00 at Sta. B3. The higher TSS values at Sta. B3 compared to Stas. B1 and B2 may reflect the result of wave action stirring up bottom sediment. Nutrient concentrations are within ranges expected for coastal waters. Silicates are much lower at the lateral stations compared to off the river

mouth, demonstrating dilution of silicates entering the marine environment from the land and their uptake by siliceous phytoplankters.

## Flora

Table 4 provides a listing of the plant species recorded during the survey. A total of 39 taxa of plants were recorded in the Project area. Only three (8%) of the species are native plants: two indigenous and one likely indigenous. An additional species is an early Polynesian introduction (“canoe plant”), raising the category of “natives” more broadly defined to 10%, a value typical from surveys in lowland locations throughout the Hawaiian Islands.

**Table 4. Plant species observed at the Hanalei River Bank Stabilization site.**

Species listed by family	Common name	Status	Abundance
<b>PTERIDOPHYTES - FERNS &amp; FERN ALLIES</b>			
POLYPODIACEAE			
<i>Phymatosorus grossus</i> (Langsd. & Fisch.) Brownlie	<i>lauae</i>	Nat	R
PTERIDACEAE			
<i>Pityrogramma calomelanos</i> (L.) Link	silver fern	Nat	U
THELYPTERIDACEAE			
<i>Christella dentata</i> (Forssk.) Brownsey & Jermy	wood fern	Nat	U
<b>FLOWERING PLANTS (ANGIOSPERMS)</b>			
<b>MONOCOTS</b>			
ARECACEAE			
<i>Archontophoenix alexandrae</i> (F. v. Muell.) H. A. Wendl. & Drude	Alexander palm	Nat	R
COMMELINACEAE			
<i>Commelina diffusa</i> N. L. Burm.	<i>honohono</i>	<b>Pol</b>	O
CYPERACEAE			
<i>Cyperus javanicus</i> Houtt.	<i>‘ahu‘awa</i>	<b>Ind</b>	U
<i>Fimbristylis littoralis</i> Gaud.	---	Nat	O
POACEAE			
<i>Echinochloa crus-galli</i> (L.) P. Beauv.	barnyard grass	Nat	U
<i>Eleusine indica</i> (L.) Gaertn.	wiregrass	Nat	R
<i>Megathyrsus maximus</i> (Jacq.) B.K. Simon & W.L. Jacobs	Guinea grass	Nat	A
<i>Saccharum</i> sp.	sugar or wild cane	Nat	O
<i>Urochloa mutica</i> (Forssk.) Nguyen	California grass	Nat	O

Table 4 (continued).

FLOWERING PLANTS				
EUDICOTS				
ARALIACEAE				
<i>Schefflera actinophylla</i> (Endl.) Harms	octopus tree	Nat		R
AMARANTHACEAE				
<i>Amaranthus spinosus</i> L.	spiny amaranth	Nat		U
ASTERACEAE				
<i>Ageratum conyzoides</i> L.	<i>maile hohono</i>	Nat		O
<i>Emilia fosbergii</i> Nicolson	Flora's paintbrush	Nat		R
<i>Pluchea carolinensis</i> (Jacq.) G. Don	sourbush	Nat		O
<i>Sphagneticola trilobata</i> (L.)	wedelia	Nat		O
<i>Synedrella nodiflora</i> (L.) Gaertn.	---	Nat		U
BIGNONIACEAE				
<i>Spathodea campanulata</i> P. Beauv.	African tulip tree	Nat		U
BUDDLEIACEAE				
<i>Buddleia asiatica</i> Lour.	dog tail	Nat		U
CONVOLVULACEAE				
<i>Ipomoea indica</i> (J. Burm.) Merr	<i>koali 'awa</i>	<b>Ind</b>		R
<i>Ipomoea obscura</i> (L.) Ker-Gawl.	--	Nat		R
CUCURBITACEAE				
<i>Coccinia grandis</i> (L.) Voigt	scarlet-fruited gourd	Nat		R
EUPHORBIACEAE				
<i>Euphorbia hirta</i> L.	garden spurge	Nat		O
FABACEAE				
<i>Crotalaria incana</i> L.	fuzzy rattlepod	Nat		U
<i>Desmanthus permambucanus</i> (L.) Thell.	virgate mimosa	Nat		U
<i>Desmodium incanum</i> DC.	Spanish clover	Nat		O
<i>Falcataria moluccana</i> (Miq.) Barneby & J. W. Grimes	Moluccan albizia	Nat		R
<i>Leucaena leucocephala</i> (Lam.) deWit	<i>koa haole</i>	Nat		C
<i>Mimosa pudica</i> L.	sensitive plant	Nat		O
<i>Neonotonia wightii</i> (Wight & Arnott) Lackey	glycine vine	Nat		O
MYRTACEAE				
<i>Psidium guajava</i> L.	common guava	Nat		U
<i>Syzygium cumini</i> (L.) Skeels	Java plum	Nat		O
ONAGRACEAE				
<i>Ludwigia octovalvis</i> (Jacq.) Raven	primrose willow, <i>kāmole</i>	<b>Pol?</b>		R
POLYGALACEAE				
<i>Polygala paniculata</i> L.	bubblegum plant	Nat		U
RUBIACEAE				
<i>Spermacoce assurgens</i> Ruiz & Pav.	buttonweed	Nat		U
SOLANACEAE				
<i>Solanum americanum</i> Mill.	<i>pōpolo</i>	<b>Ind?</b>		R
VERBENACEAE				
<i>Stachytarpheta cayennensis</i> (Rich.) Val.	---	Nat		R

Legend to Table 4

STATUS = distributional status for the Hawaiian Islands:

**Ind** = indigenous; native to Hawaii, but not unique to the Hawaiian Islands.

Table 4 (continued).

**Nat** = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.

**Pol** = An early Polynesian introduction. Introduced before 1778.

ABUNDANCE = occurrence ratings for plant species:

R - Rare seen in only one or two locations.

U - Uncommon seen at most in several locations.

O - Occasional seen with some regularity.

C - Common observed numerous times during the survey.

A - Abundant found in large numbers; may be locally dominant.

## Fauna

### *Aquatic Fauna*

Table 5 is a listing of aquatic species identified in Hanalei River. The table includes observations of species in the estuary made by AECOS biologists on January 6, 2022 and farther downstream in 2012 (AECOS, 2012). Table 5 also includes species observed in Hanalei River by Hawai'i Department of Land and Natural Resources–Division of Aquatic Resources (HDLNR-DAR) and listed in the *Hawai'i Watershed Atlas* (Parham et al., 2008). Other species listed in the Watershed Atlas may occur in reaches upstream from the Project area, but only those identified as specifically occurring in the estuary or lower reach are noted in Table 5. Estimates of relative abundance are provided only for those species observed in the estuary by AECOS in January 2022.

We observed a damselfly and two dragonflies: the introduced Rambur's forktail damselfly (*Ischnura ramburii*); the scarlet skimmer (*Crocothemis servilia*); and indigenous wandering glider (*Pantala flavescens*). The larvae (nymphs) of these species are aquatic. Other than these insects and the call of a bullfrog (*Lithobates catesbeianus*), the only aquatic species observed during our survey was a school of fingerling redbelly tilapia (*Tilapia zilli*), an introduced cichlid. A previous AECOS survey (2012) just downstream of the Project area observed redbelly tilapia and blackchin tilapia (*Sarotherodon melanothron*), as well as two native stream gobies ('o'opu nākea or *Awaous stamineus* and 'o'opu 'akupa or *Eleotris sandwicensis*), and two native estuarine fish ('ama'ama or *Mugil cephalus* and āholehole or *Kuhlia xenura*). HDLNR-DAR reports almost all of Hawai'i's native amphidromous<sup>3</sup> animals occur in the freshwater reaches of Hanalei River,

<sup>3</sup> Meaning they move between fresh and salt water as part of their life cycle.

indicating the Project area is a migratory pathway to and from the ocean for native stream animals.

**Table 5. Checklist of aquatic species found in Hanalei River in the Project area.**

PHYLUM, CLASS, ORDER					
FAMILY					
Species	Common name	Status	Abundance	Notes	
INVERTEBRATES					
ARTHROPODA, INSECTA, DIPTERA					
CHIRONOMIDAE					
unid. Chironomidae	midge	Nat	---	<2>	
ARTHROPODA, INSECTA, ODONATA					
COENAGRIONIDAE					
<i>Enallagma civile</i> (Hagen, 1861)	familiar bluet	Nat	---	<2>	
<i>Ischnura posita</i> (Hagen, 1861)	fragile forktail	Nat	---	<2>	
<i>Ischnura ramburii</i> (Selys, 1850)	Rambur's forktail	Nat	R	<1,2>	
<i>Megalagrion</i> sp.	unid. <i>pinao 'ula</i> , Hawaiian damselfly	End	---	<2>	
LIBELLULIDAE					
<i>Crocothemis servilia</i> (Drury, 1773)	scarlet skimmer	Nat	R	<1>	
<i>Pantala flavescens</i> (Fabricius, 1798)	wandering glider	Ind	R	<1>	
ARTHROPODA, MALACOSTRACA, DECAPODA					
ATYIDAE					
<i>Atyoida bisulcata</i> J.W. Randall, 1840	Hawaiian mountain shrimp, 'ōpae kala'ole	End	---	<2>	
CAMBARIDAE					
<i>Procambarus clarkii</i> (Girard, 1852)	Louisiana crawfish	Nat	---	<2>	
PALAEMONIDAE					
<i>Macrobrachium grandimanus</i> (J. W. Randall, 1840)	'ōpae 'oeha'a, Hawaiian river prawn,	End	---	<2>	
unid. Palaemonidae		---	---	<3>	
VERTEBRATES					
CHORDATA, TELEOSTEI, CYPRINODONTIFORMES					
POECILIIDAE					
<i>Xiphophorus hellerii</i> Heckel, 1848	green swordtail	Nat	---	<2>	
GOBIIFORMES					
ELEOTRIDAE					
<i>Eleotris sandwicensis</i> Vaillant and Sauvage, 1875	'o'opu 'akupa	End	---	<3>	



Table 5 (continued).

PHYLUM, CLASS, ORDER					
FAMILY					
<i>Species</i>	Common name	Status	Abundance	Notes	
<b>GOBIIDAE</b>					
unid. Gobiidae		---	---	<2>	
<i>Awaous stamineus</i> (Eydoux & Souleyet, 1850)	<i>‘o‘opu nākea</i>	<b>End</b>	---	<2,3>	
<b>PERCIFORMES</b>					
<b>CICHILIDAE</b>					
<i>Sarotherodon melanotheron</i> (Rüppell, 1852)	blackchin tilapia	Nat	---	<3>	
<i>Tilapia zillii</i> (Gervais, 1848)	redbelly tilapia	Nat	0	<1,3>	
<b>KUHLIIDAE</b>					
<i>Kuhlia xenura</i> (Jordan and Gilbert, 1882)	<i>āholehole</i>	<b>End</b>	---	<3>	
<b>CHORDATA, AMPHIBIA, TESTUDINES</b>					
	turtles				
<b>EMYDIDAE</b>					
<i>Trachemys scripta elegans</i> (Wied-Neuwied, 1839)	red-eared slider	Nat	---	<3>	
<b>CHORDATA, REPTILIA, ANURA</b>					
<b>RANIDAE</b>					
<i>Lithobates catesbeianus</i> Shaw, 1802	bullfrog	Nat	†	<1>	

## Legend to Table 5

## STATUS:

Nat - Naturalized, non-native. An introduced or exotic species presently established in Hawai'i.

**Ind** - Indigenous. A native species also found elsewhere in the Pacific.

**End** - Endemic - A native species found only in the Hawaiian Islands.

## ABUNDANCE:

R - Rare; only one to three individuals seen.

0 - Occasional; three to twelve individuals seen.

## NOTES:

† - call only

<1> - Observed in the present AECOS survey (2022).

<2> - Reported in HDLNR-DAR data as occurring in the estuary or lower reach and summarized in *Hawaii Watershed Atlas* (Parham et. al, 2008).

<3> - Reported from the estuary (AECOS, 2012).

Green sea turtle or *honu* (*Chelonia mydas*) is typically found in marine waters but has been observed within the estuarine reach of Hanalei River (AECOS, 2012; NOAA-ONMS-HIHNMS, nd).

### Avian Fauna

Weather conditions were ideal for avian detection during our survey, with unlimited visibility, no precipitation, and light winds (1 to 5 mph). However, ambient road noise from Kūhiō Highway detracted from our acoustic detection of certain bird species. Numerous people on kayaks and standup paddleboards in Hanalei River transited through the Project site during our survey, which certainly had an impact on waterbird presence. The birds counted from our survey are listed in Table 6.

**Table 6. Avian species detected at the Hanalei River Bank Stabilization site.**

Common Name	ORDER FAMILY Species	Status	Total Count
	<b>ANSERIFORMES</b>		
	ANATIDAE		
Hawaiian Goose, <i>nēnē</i>	<i>Branta sandvicensis</i>	E	2, 2 <del>W</del>
Hawaiian Duck, <i>koloa maoli</i>	<i>Anas wyvilliana</i>	E	1
	<b>GALLIFORMES</b>		
	PHASIANIDAE		
Domestic Chicken	<i>Gallus gallus</i>	NN	4
	<b>COLUMBIFORMES</b>		
	COLUMBIDAE		
Spotted Dove	<i>Streptopelia chinensis</i>	NN	1
	<b>GRUIFORMES</b>		
	RALLIDAE		
Common Gallinule, <i>‘alae ‘ula</i>	<i>Gallinula galeata sandvicensis</i>	E	2
Hawaiian Coot, <i>‘alae ke‘oke‘o</i>	<i>Fulica alai</i>	E	1 <del>W</del>
	<b>CHARADRIIFORMES</b>		
	RECURVIROSTRIDAE		
Black-necked Stilt, <i>ae‘o</i>	<i>Himantopus mexicanus knudseni</i>	E	†
	CHARADRIIDAE		
Pacific Golden-Plover, <i>kōlea</i>	<i>Pluvialis fulva</i>	IM	†
	<b>PELECANIFORMES</b>		
	ARDEIDAE		
Cattle Egret	<i>Bubulcus ibis</i>	NN	3
Black-crowned Night-Heron, <i>‘auku‘u</i>	<i>Nycticorax nycticorax</i>	I	5 <del>W</del>

Table 6 (continued).

Common Name	ORDER FAMILY <i>Species</i>	Status	Total Count
<b>PASSERIFORMES</b>			
ZOSTEROPIDAE			
Warbling White-eye	<i>Zosterops japonicus</i>	NN	5
STURNIDAE			
Common Myna	<i>Acridotheres tristis</i>	NN	6
ESTRILDIDAE			
Chestnut Munia	<i>Lonchura atricapilla</i>	NN	12
FRINGILLIDAE			
House Finch	<i>Haemorhous mexicanus</i>	NN	1
ICTERIDAE			
Western Meadowlark	<i>Sturnella neglecta</i>	NN	2

## Key to Table 6

## Status:

**E** = Endemic to the Hawaiian Islands.**I** = Indigenous to the Hawaiian Islands.**IM** = Indigenous, migratory species.**NN** = Naturalized, non-native species (introduced).

Total Count: species counted from a single point-count station.

W = Observed during the 30-minute waterbird count.

† = Incidental observation, observed outside of the timed count.

A total of 39 individual birds of 11 species representing 10 separate families were recorded from a single point-count station at the Project site. Avian diversity and densities were representative of the disturbed lowland forest, wet agricultural fields, and riverine habitat present at the Project site and vicinity. The three most abundant species—Chestnut Munia (*Lonchura atricapilla*), Common Mynah (*Acridotheres tristis*), and Warbling White-eye (*Zosterops japonicus*)—account for 31% of all birds recorded during the station count. The avian point-count survey counted eight non-native species and three native species. Native avian species observed are endemic Hawaiian Goose or *nēnē* (*Branta sandvicensis*), endemic Hawaiian Duck or *koloa maoli* (*Anas wyvilliana*), and the Hawaiian endemic subspecies of Common Gallinule or *‘alae ‘ula* (*Gallinula galeata sandvicensis*). *Nēnē* is listed as a threatened species under federal endangered species statutes, and as endangered under State of Hawai‘i equivalent statutes. *Koloa* and *‘alae ‘ula* are listed as endangered under both federal and State of Hawai‘i endangered species statutes.

The 30-minute waterbird count at the Project site recorded eight individual waterbirds of three species, including two species not counted from the 6-minute point-count station: indigenous, Black-crowned Night-Heron or 'auku'u (*Nycticorax nycticorax*) and endemic Hawaiian Coot or 'alae ke'oke'o (*Fulica alai*). The number and diversity of species counted at Hanalei River in the Project area is relatively low compared to the total count—a much greater density and diversity of protected waterbirds and shorebirds were observed in the pond fields immediately south and east of the Project area.

Two additional species—the Hawaiian endemic subspecies of Black-necked Stilt or ae'o (*Himantopus Mexicanus knudseni*) and indigenous migratory Pacific Golden Plover or kōlea (*Pluvialis fulva*)—were observed at the Project site outside of the timed counts and are listed in Table 6 as incidental observations.

### ***Mammals***

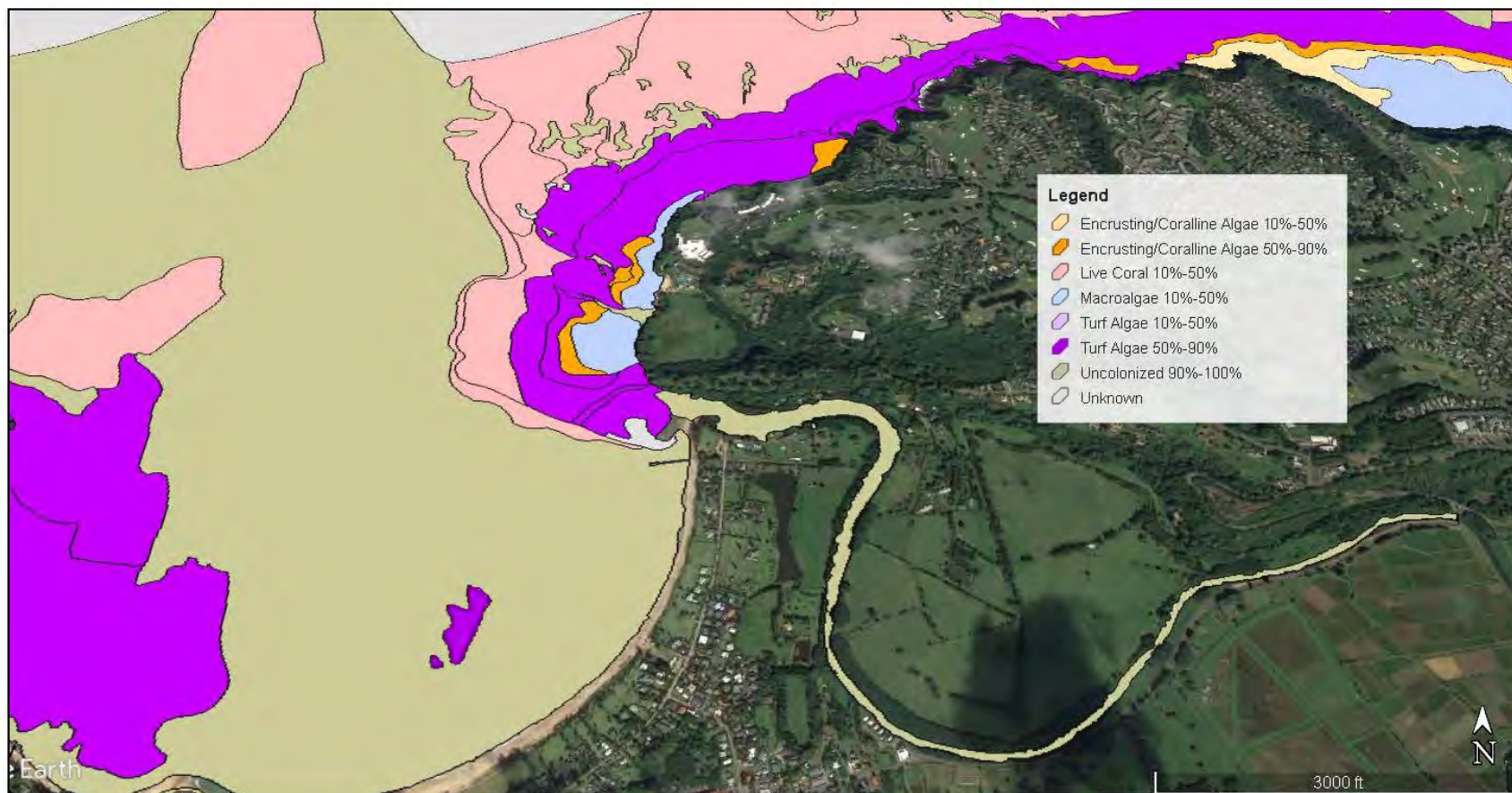
We recorded only tracks of an indetermined rodent species at the Project site. No other mammalian species were observed during our survey.

### **Marine Survey**

The bottom off the mouth of the Hanalei River is sand. Freshwater input here was noticeable by cooler water temperature and Schlieren effect created by the water density differences in the mixing zone. *Kuhlia xenura* (aholehole) was observed at the stream mouth. Offshore, the bottom is a mix of cobbles and boulders. Coralline and fleshy algae grow on the boulders, including: *Hydrolithon* spp. and *Sporolithon* sp. No other biota was observed in this survey.

Hanalei Bay has well-developed fringing reefs along the east and west sides, with an extensive area of carbonate sediments across the center of the bay. The reefs with highest coral cover occur in deep water and on reef slopes not directly exposed to the strongest north and west swells (Friedlander and Brown, 2006). Conversely, low coral cover is found on reef flats close to freshwater inputs. The shallow fringing reefs are in a dynamic and relatively harsh environment, with exposure to substantial wave energy, turbidity, sediment loading, emergence exposure (at extreme low tides), and freshwater input (Friedlander and Brown, 2006). The NOAA-NOS biological cover map shows the bottom of Hanalei Bay, just seaward of the mouth of the river, to be mud with algal turf cover between 50 - 90% (Figure 5). Farther offshore, hard bottom supports coral cover between 10 and 50% (light pink color). The center of the bay is uncolonized.

The Coral Reef Assessment and Monitoring Program (CRAMP, 2009) describes the eastern side of Hanalei Bay at a 3-m depth monitoring site to have between 5



**Figure 5. Benthic habitat characterization off Hanalei Stream mouth (after Battista et al, 2007).**

and 25% coral cover, with a mean coral species richness of 9. At a deeper (8 m) site, between 25 and 35% coral cover has been observed, with a mean coral species richness of 8, throughout the years 1999 and 2009. In 2013, AECOS biologists conducted surveys extending from Hanalei River mouth to the reef flat fronting Pu'u Pōā Point and offshore approximately 0.5 km (0.3 mi; AECOS, 2013b). The nearshore reef flat in this area was dominated by turf and macroalgae. Filter feeding bivalves were present in high numbers adjacent to Hanalei River mouth, and the blue-green alga, *Lyngbya*—often associated with elevated nutrient levels (Arthur et al., 2009; Ahern et al., 2007)—was abundant. Juvenile fishes were found on the reef flat and adults were found in the sand channel, the high relief north reef flat, and offshore reef slope areas. Coral observations made at various locations and depths (20 transect locations) across Hanalei Bay by Friedlander and Brown (2006) between 1993 and 2004 showed the three coral taxa with the highest average percent coral cover to be *Montipora patula* (11%), *M. capitata* (4%), and *Porites lobata* (~2%). Much of the coral cover in Hanalei Bay is encrusting, a response to high wave energy and reduced light caused by sedimentation (Friedlander and Brown, 2006).

## Discussion and Recommendations

Recommendations included below are partly based on U.S. Fish and Wildlife Service, “Avoidance and Minimization Measures” (USFWS-PIFWO, 2022). Implementation of the recommendations (provided below as bulleted items) by the Project contractor will minimize impacts to listed species to the maximum extent practicable.

### Jurisdictional Waters

The perennial Hanalei River is a tributary to the Pacific Ocean at Hanalei Bay and, therefore, is a Water of the U.S. The wetland in the Project area is also jurisdictional because it is directly adjacent to Hanalei River. The limit of federal jurisdiction is the OHWM of the river and upland boundary of the adjacent wetland, as delineated within the Project area and depicted in Fig. 4. Federal jurisdiction is solely determined by the USACE and is based upon the USACE accepting our findings. Acceptance may require a field visit by a USACE representative from the Regulatory Branch to confirm our delineation. Our delineation is not official until an acceptance letter from the USACE is received by the applicant.

## Water Quality

Hanalei River is a “state water” as defined by the Hawai‘i Revised Statutes (HRS) Chapter 342D-1. Hanalei River estuary, on which the Project is located, is considered a Class 2 inland waterbody. According to the water quality standards (§11-54-3; HDOH, 2014), the objectives of Class 2 inland waters are:

...protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation.

Class 2 designated uses are:

...all uses compatible with protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class.

Hanalei Bay is considered a Class AA embayment in the Hawai‘i water quality standards (HDOH, 2014). According to the rule (§11-54-3), the objective of Class AA waters is:

...that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected.

Designated uses of the bay are:

...oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, compatible recreation, and aesthetic enjoyment.

A total maximum daily load (TMDL) for bacteria (*Enterococcus*) and TSS (serving as a surrogate for turbidity) was developed and approved for Hanalei Watershed streams and estuaries in 2008 (TTI and HDOH, 2008); however, the segment of Hanalei River within the Project area remains on the 2020 list of impaired waters (HDOH, 2020) as “Hanalei Bay upstream of Dolphin [restaurant]”. The 2020 listing states that this estuarine segment remains impaired for turbidity and insufficient data exists to make a determination for *Enterococcus*, TN, NO<sub>3</sub>+NO<sub>2</sub>, TP, NH<sub>4</sub>, and chl *a*.

The purpose of the water quality measurements presented in this report is to characterize existing conditions and not to establish compliance with water quality standards (Table 7). In fact, the criteria for turbidity, nutrient, and



chlorophyll a measurements require making comparisons with geometric mean values, so a minimum of three separate sampling events per station would be required to generate a statistic for comparison with these criteria.

**Table 7. Selected state of Hawai'i water quality criteria for estuaries (HDOH, 2014).**

Parameter	Geometric Mean value not to exceed this value	Value not to be exceeded more than 10% of the time	Value not to be exceeded more than 2% of the time
Total Nitrogen ( $\mu\text{g N/l}$ )	200.00	350.00	500.00
Ammonia Nitrogen ( $\mu\text{g NH}_4\text{-N/l}$ )	6.00	10.00	20.00
Nitrate+Nitrite ( $\mu\text{g NO}_3\text{+NO}_2\text{-N/l}$ )	8.00	25.00	35.00
Total Phosphorus ( $\mu\text{g P/l}$ )	25.00	50.00	75.00
Chlorophyll a ( $\mu\text{g/l}$ )	2.00	5.00	10.00
Turbidity (NTU)	1.5	3.00	5.00
Other applicable "standards":			
- pH units shall not deviate more than 0.5 units from ambient conditions and not lower than 7.0 nor higher than 8.6			
- Dissolved oxygen shall not decrease below 75% of saturation.			
- Temperature shall not vary more than 1 C° from ambient conditions.			
- Salinity shall not vary more than 10% from ambient conditions.			

The river was not stratified in the Project area and the salt water influence was negligible during our sampling event on January 6, 2022. Suspended sediments and nutrients are highest in the agricultural ditch that discharges into the river from the south and the ditch appears to contribute noticeably to the load of pollutants in the river. The level of nutrients and suspended sediments is high in the river, but water quality conditions are supportive of native fauna.

Best management practices (BMPs) should be employed during project design and construction to maintain good water quality of Hanalei River. It is important to reduce transport of sediments to the river because of potential pollutants associated with particulates carried by the stream to nearshore waters.

Project work may be completed with minimum impacts to river water quality and without negative impacts to long-term water quality if proper BMPs are implemented:

- Minimize turbidity and siltation from project-related work. Use effective silt containment devices and curtail work during adverse weather conditions.
- Prior to use, clean pollutants from all project-related materials and equipment (dredges, barges, backhoes, etc.) that will be placed in the water.
- Do not stockpile project-related materials (fill, revetment rock, pipe, etc.) in wetlands or the river.
- Dispose of all debris removed from aquatic environments at an approved upland or ocean dumping site.
- Prevent contamination (trash or debris disposal, non-native species introductions, attraction of non-native pests, etc.) of aquatic habitats from project-related activities. Implement a litter-control plan and develop a hazard analysis and critical control point plan to prevent attraction and introduction of non-native species.
- Fuel project-related vehicles and equipment away from wetlands and the river and develop a contingency plan to control petroleum products accidentally spilled during the work. Store absorbent pads and containment booms on-site, as appropriate, to facilitate the clean-up of accidental petroleum releases.
- Protect under-layer fills from erosion with stones (or core-loc units) as soon after placement as practicable.
- Protect from erosion any soil exposed near water as part of the Project (with plastic sheeting, filter fabric, etc.) after exposure and stabilize as soon as practicable (with native or non-invasive vegetation matting, hydroseeding, etc.).

## Floral Resources

No plant species listed as endangered or threatened under either federal or State of Hawai'i endangered species statutes (HDLNR, 1998; USFWS, 2022) was recorded during the course of this survey. Bank stabilization in the Project area will not adversely affect botanical resources.

## Fauna Resources

### *Aquatic Fauna*

Federal and state ESA-listed Threatened Newcomb's snail (*Erinna newcombi*) is an aquatic snail found from fast-flowing stream water in six watersheds on Kaua'i Island: Kalalau Stream, Lumaha'i River, Hanalei River (four subpopulations), Keālia Stream, Makaleha Stream (two subpopulations), and the North Fork Wailua River (USFWS, 2006). Newcomb's snail is a freshwater obligate species that attaches eggs to submerged rocks or vegetation. The entire life cycle is tied to the stream system in which the adults live and, unlike many other native stream species, larval stages do not disperse widely. The areas where Newcomb's snail are found are very small, with the largest location being only 30 sq m (320 sq ft) in upper Hanalei River. All four subpopulations in Hanalei River are found in the upper reaches and more than 4.8 km (3.0 mi) upstream of the Project area. The proposed Project will not impact this species.

Five species of the endemic damselfly of the genus *Megalagrion*, which have aquatic larval stages, are listed as endangered (USFWS, 2010; 2012). Two of the species—Pacific Hawaiian damselfly (*M. pacificum*) and Orangeblack Hawaiian damselfly (*M. xanthomelas*)—used to exist on Kaua'i, but are believed to be extirpated from the island (Polhemus and Asquith, 1996; USFWS, 2010, 2012). The proposed Project will not affect these species.

Within the Project area, Hanalei River may not provide ideal habitat for native amphidromous animals, but this stream reach, at a minimum, serves as passageway to more suitable stream environments upstream. All five endemic 'o'opu species have been reported in Hanalei River (Parham et. al, 2008; AECOS, 2012). HDLNR regulates fisheries in the state, including the taking of 'o'opu under Hawaii Administrative Rule (HAR) §13-100-2 (HDLNR, 1989). Other native species observed in the river include endemic crustaceans 'ōpae 'oeha'a (*Macrobrachium grandimanus*) and 'ōpae kala'ole (*Atyoida bisulcata*), as well as the endemic Hawaiian stream limpet hīhīwai (*Neritina granosa*). These native stream animals are diadromous: eggs are laid in the stream and the larvae that hatch from these eggs move downstream and out into the ocean where they develop for a time before migrating back into freshwater to grow to maturity.

(Ford and Kinzie, 1982; Kinzie, 1988). Project work should be planned to protect the existing water quality and not impede the amphidromous cycle of native aquatic species. Migrating fish are not likely to be affected by sound impacts from sheet pile driving. Exposure to noise from sheet pile installation activities is expected to result in no more than an insignificant level of behavioral modification in the form of temporary avoidance of the immediate area

- Downstream and upstream migration pathways should be maintained.
- New structures should not include drains or grates that may entrain drifting larvae, nor overhanging culverts that may obstruct upstream movement of recruiting juveniles.
- Construction BMPs for work in aquatic environments should be incorporated into the Project plan to minimize the degradation of water quality and impacts to fish and wildlife resources.

### ***Waterbirds***

Protected Hawaiian waterbirds on Kauaʻi include the endemic Hawaiian Duck, endemic Hawaiian Coot, the Hawaiian endemic subspecies of Common Gallinule, and the Hawaiian endemic subspecies of Black-necked Stilt. These waterbird species are protected under both state and federal endangered species statutes (HDLNR, 2015; USFWS, nd-a). Black-crowned Night Heron is an indigenous water-obligate species with healthy populations on most Hawaiian Islands and protected under the federal Migratory Bird Treaty Act.

Although technically not a waterbird, Hawaiian Goose or *nēnē* (*Branta sandwichensis*) is a federally-listed threatened and state-listed endangered, species with breeding populations on Kauaʻi.

The riparian vegetation along the left bank of Hanalei River at the Project site offers good nesting and forage habitat for Hawaiian waterbird species. However, elevated human activity in the river (kayaking, paddleboarding) brings humans in close proximity to protected waterbirds, which may deter some species from utilizing the habitat. Habitat for waterbirds in nearby pond fields (*loʻi kalo*) growing taro and lotus are excellent waterbird habitat. Given the existing habitat, protected Hawaiian waterbirds are very likely to occur in the Project area during and after construction, and are at risk of being impacted by the Project. The following BMPs are recommended to minimize or avoid impacts to Hawaiian waterbird species:

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site or nearby.
- If an endangered waterbird enters an active construction area, cease all construction activity. Work may resume after the individual leaves the area on its own volition.
- Avoid creating surface water features (puddles, etc.) after grading and grubbing. Surface water should be removed to avoid creating a nuisance attractant.
- A qualified biologist should conduct a preconstruction survey for endangered waterbird nests immediately prior to construction activity near water features. If a nest is found, contact USFWS immediately. Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.

### ***Seabirds***

Protected night-flying seabirds include Hawaiian Petrel (*Pterodroma sandwichensis*), Wedge-tailed Shearwater (*Ardenna pacifica*), Newell's Shearwater (*Puffinus newelli*), and Band-rumped Storm-petrel (*Hydrobates castro*). Hawaiian Petrel, Newell's Shearwater, and Band-rumped Storm-petrel nest in high-elevation mountainous habitat. In the summer and fall, nocturnally flying seabirds (especially fledglings) transiting to the sea from inland locations can become disoriented by exterior lighting. When disoriented, a seabird can collide with man-made structures or the ground. If not killed outright, a dazed or injured bird is an easy target of opportunity for feral mammals (Podolsky et al., 1998; Ainley et al., 2001; Day et al., 2003). The primary cause of mortality in nesting seabirds in Hawai'i is predation by alien mammalian species at the nesting colonies (Ainley et al., 2001). Collision with man-made structures is considered the second most significant cause of mortality of these seabirds in Hawai'i.

- From an avian resource's perspective, night-time construction should be avoided during the seabird fledging season that extends from September 15<sup>th</sup> through December 15<sup>th</sup> each year. This minimization will ensure that fledgling birds are not attracted to and disoriented by construction lights. Any exterior lighting related to the Project should be dark sky complaint and shielded (See HDLNR-DOFAW, 2016).

### ***Mammalian Resources***

All four of the established alien Muridae found in Hawai'i—European house mouse (*Mus musculus*), roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), and black rat (*Rattus exulans hawaiiensis*)—may occur and utilize resources within the Project area. No other mammalian species were detected. With the exception of the endangered and endemic Hawaiian hoary bat or 'ōpe'ape'a (*Lasiurus cinereus semotus*), all terrestrial mammalian species found in the Hawaiian Islands are alien species and most are deleterious to native ecosystems.

### ***Hawaiian Hoary Bat***

It is possible that the native Hawaiian hoary bat uses resources within the Project vicinity. The principal potential impact of the Project on bats would occur when site vegetation is cleared and grubbed. This species of bat uses multiple roosts within a home territory (Bonaccorso, 2015), so the disturbance associated with removal of any particular tree would be minimal. However, an exception occurs during the bat pupping season, when a female bat carrying a pup may be unable to rapidly vacate a roost tree that is being felled; or, an unattended pup is unable to flee a tree that is being felled.

- Potential adverse impacts from tree removal can be avoided or minimized by not clearing woody vegetation taller than 4.6 m (15 ft) between June 1 and September 15, the period in which bats may have pups.

## **Other Resources of Potential Concern**

### ***Critical Habitat***

No federally designated Critical Habitat for any species occurs within the Project area (USFWS, nd-b). No equivalent designation exists under State of Hawai'i endangered species statutes.

## **Essential Fish Habitat**

The 1996 Sustainable Fishery Act amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and subsequent Essential Fish Habitat (EFH) Regulatory Guidelines (NOAA, 2002) describe provisions to identify and protect habitats of federally-managed marine and anadromous fish species. Under the various provisions, federal agencies that fund, permit, or undertake activities that may adversely affect EFH are required to consult with the National Marine Fisheries Service (NMFS). EFH is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to

maturity” (MSFCMA, 1996; NOAA, 2002). The MSA provisions at 50 CFR 600.10 provide further definition for the purpose of interpreting EFH as follows:

*“Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle.*

EFH provisions in MSFCMA designate that species harvested in sufficient quantities to require fisheries management are to be subdivided into similar Management Unit Species (MUS). Five MUS groups are currently managed in Hawaiian waters: bottomfish, pelagics, precious corals, crustaceans, and coral reef ecosystem (see Table 8). In the waters surrounding the Hawaiian Islands, EFH for coral reef ecosystem MUS—as defined by the Final Coral Reef Ecosystem Fishery Management Plan (WPRFMC, 2001) and subsequent Fishery Ecosystem Plan for the Hawaiian Archipelago (WPRFMC, 2009)—“includes all waters and habitat at depths from the sea surface to 50 fathoms extending from the shoreline (including state and territorial land and waters) to the outer boundary of the Exclusive Economic Zone (EEZ).”

**Table 8. EFH Designations for Hawai‘i Archipelago FEP Management Units**

Management Unit	Species Complex	EFH
Pelagic	Temperate species Tropical species Sharks Squid	<b>Eggs and larvae:</b> the water column extending from the shoreline to the outer limit of the EEZ down to a depth of 656 ft (200 m)  <b>Juvenile/adults:</b> the water column extending from the shoreline to a depth of 3,280 ft (1,000 m)
Bottomfish and Seamount Groundfish	Shallow-water species (0 to 50 fm)	<b>Eggs and larvae:</b> the water column extending from the shoreline to the outer limit of the EEZ down to a depth of 1,310 ft (400 m)  <b>Juvenile/adults:</b> the water column and all bottom habitat extending from the shoreline to a depth of 1,310 ft (400 m)
Bottomfish and Seamount Groundfish	Deep-water species (50 to 200 fm)	<b>Eggs and larvae:</b> the water column extending from the shoreline to the outer limit of the EEZ down to a depth of 1,310 ft (400 m)



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**Juvenile/adults:** the water column and all bottom habitat extending from the shoreline to a depth of 1,310 ft (400 m)

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Table 8 (continued).

Crustacean	Spiny and slipper lobster complex	<b>Eggs and larvae:</b> the water column from the shoreline to the outer limit of the EEZ down to a depth of 490 ft (150 m)
	Kona crab	<b>Juvenile/adults:</b> all of the bottom habitat from the shoreline to a depth of 330 ft (100 m)
Coral Reef Ecosystem	All Currently Harvested Coral Reef Taxa (CHCRT)	EFH for the Coral Reef Ecosystem MUS includes the water column and all benthic substrate to a depth of 330 ft (100 m) from the shoreline to the outer limit of the EEZ for eggs, larvae, juveniles and adults
	All Potentially Harvested Coral Reef Taxa (PHCRT)	

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The Western Pacific Regional Fishery Management Council (WPRFMC) has moved towards an ecosystem-based approach to fisheries management and subsequently restructured the management framework from species-based fishery management plans (FMPs) to place-based fishery ecosystem plans (FEPs). The Hawai'i Archipelago FEP establishes the framework under which the WPRFMC manages fishery resources and begins the integration and implementation of ecosystem approaches to management in the Hawaiian Archipelago. This FEP does not establish any new fishery management regulations, but rather consolidates existing fishery regulations for demersal species. Specifically, this FEP identifies as MUS those species known to be present in waters around the Hawaiian Archipelago and incorporates all of the management provisions of the Bottomfish and Seamount Groundfish FMP, the Crustaceans FMP, the Precious Corals FMP, and the Coral Reef Ecosystems FMP that are applicable to the area.

The Hanalei River stabilization project is not directly located in EFH, but is within approximately 0.91 miles of Hanalei Bay, which is designated as EFH (including water column and all bottom areas) for coral reef ecosystem, bottomfish, pelagic, and crustacean MUS. Of the thousands of species which are federally managed under the coral reef FMP, at least 61 (juvenile and adult life stages) are known to occur in waters of Hanalei Bay (AECOS, 2013b; CRAMP, 2009, Friedlander and Brown, 2006).

## Impact Assessment

The extent of impacts associated with the proposed Project having potential to affect EFH is limited to the transport of sediment and/or pollutants and sound emissions from sheet pile driving. Hanalei River can transport Project-related materials into Hanalei Bay during rains. In-water work along the bank is proposed, and any short-term water quality impacts to EFH due to Project activities are expected to be minimal. If impacts occur, these would most likely be limited to enhancements in turbidity and suspended solids. Some change in DO may also occur, concomitant with sediment resuspension. Most of the MUS that use the EFH routinely experience a turbid environment. Any increase in turbidity from the Project is expected to be localized and of short duration. Project BMPs (as described above) are intended to reduce the extent to which turbidity from Project activities would transfer to Hanalei Bay. With effective implementation the BMPs will minimize adverse impacts to EFH and any temporary adverse effects created by the Project would be minimal. Most of the MUS routinely experience a turbid environment, therefore any temporary transport of sediments and/or pollutants by the Project would be minimal.

The proposed bank stabilization construction will require driving sheet piles. Sound generated by pile driving could harm MUS that are very near (within 1m) of the pile being driven down into the ground. Sounds generated in the marine environment have the capacity to disrupt the behavior of fish. High intensity sound (sound >183 dB SEL<sub>cum</sub>; 208 dB<sub>peak</sub>) that can be generated through pile driving and result in physical injury to fish (Dahl et al., 2015) although it is recognized that far too little is known to allow for definitive conclusions about the impact of sound energy upon the broad variety of fishes in the sea (Popper and Hastings, 2009). Sound energy has been demonstrated to harm fish primarily in association with an air-filled swim bladder, but also by:

- change in hearing capability
- damage to the inner ear
- damage of organs adjacent to the swim bladder
- adverse cellular and molecular effects
- adverse effects on eggs and larvae
- behavioral effects such as fish leaving or avoiding an area
- cumulative stress induced impacts resulting in fish becoming more susceptible to infection, predation, and slower growth.

The effects of exposure to sound varies with the frequency, intensity, and duration of the sound source and the hearing characteristics of the affected fish species. Experts disagree upon the sound intensities necessary to cause any of the above effects and have adopted interim criteria for fish (Popper et. al, 2019):

- 208 dB – peak
- 187 dB –SEL accumulated (SEL<sub>cum</sub>)
- 183 dB – SEL<sub>cum</sub> for fish less than 2 grams

The following BMPs are recommended to minimize or avoid impacts to fish from underwater sound emissions:

- The implementation of “soft starts” (use of a low energy start) would minimize potential impacts to fish, since they would likely leave the area as drilling commenced.
- Conduct underwater acoustical monitoring to gather site-specific sound (dB) data on ambient levels in the area, as well as noise generated from sheet pile installation.

With adequate design and effective BMP implementation (as described above) and the distance of the of the Project site upriver from Hanalei Bay, the sound energy generated by pile driving is not anticipated to be sufficient to result in adverse effects to MUS or EFH within or near the Project area. Fishes that occur in the Project area are expected to actively avoid impacts from the Project activities.

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Attachment A

OHWB photographs

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**Flag L01**



**Left bank looking upstream. Sugar or wild cane grows on earthen berm above OHWM.**



**Left bank looking inland (south) at wetland between Hanalei River and Kūhiō Highway.**



**Left bank looking downstream. *Hau* grows on earthen berm above and below OHWM and in adjacent wetland.**



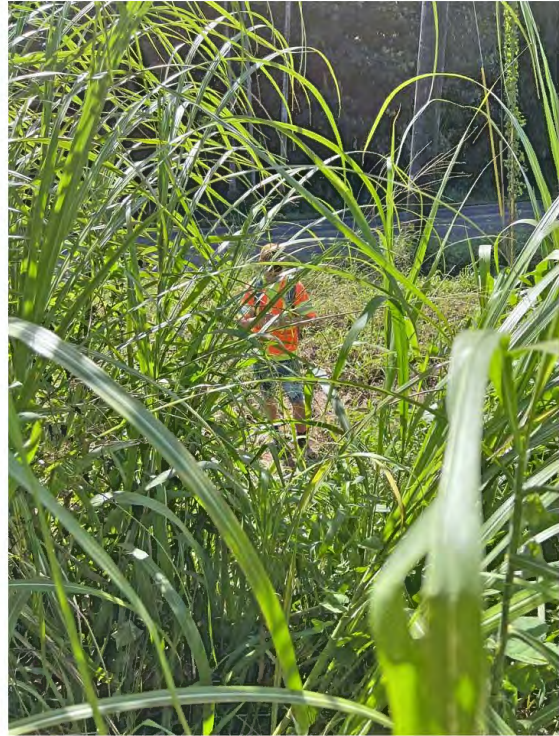
**View looking north into Hanalei River.**



**Flag L02**



**Left bank looking upstream. Sugar or wild cane and Guinea grass grows on earthen berm above OHWM.**



**Left bank looking inland (south) at wetland (narrower than at L01) between Hanalei River and Kūhiō Highway.**



**Left bank looking downstream. Sugar or wild cane and Guinea grass grows on earthen berm above OHWM.**



**View looking north through sugar or wild cane and into Hanalei River.**



**Flag L03**



**Left bank looking upstream. Guinea grass grows on earthen berm above OHWM.**



**Left bank looking inland (south) at very narrow wetland between Hanalei River and Kūhiō Highway.**



**Left bank looking downstream. Guinea grass and sugar or wild cane grows on earthen berm above OHWM.**



**View looking north into Hanalei River.**



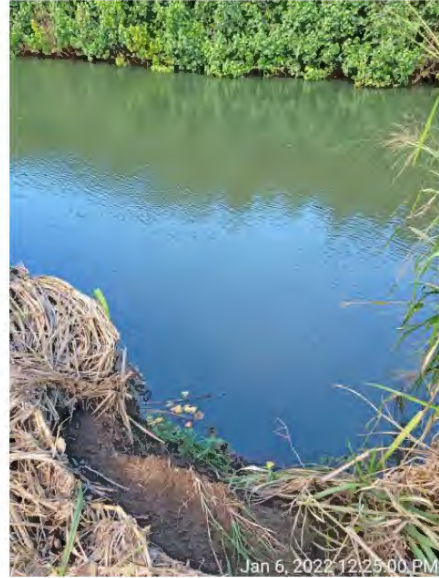
**Flag L04**



**Left bank looking upstream. Guinea grass grows on earthen berm above OHWM.**



**Left bank looking downstream. Guinea grass grows on earthen berm above OHWM.**



**View looking north into Hanalei River.**



**Flag L05**



**Left bank looking upstream. Guinea grass and Java plum grow on slumped bank adjacent to guard rail.**



**Left bank looking inland (south). Guardrail is <2 m away from top of bank.**



**Left bank looking downstream. Guinea grass and Java plum grow on slumped bank adjacent to guard rail.**



**View looking north into Hanalei River.**



**Flag L06**



**Left bank looking upstream. Guinea grass grows on slumped bank adjacent to guard rail.**



**Left bank looking inland (south). Headwall of ditch culvert is seen on opposite side of Kūhiō Highway.**



**Left bank looking downstream. Guinea grass and Java plum grow on slumped bank adjacent to guard rail.**



**View looking north into Hanalei River. Turbid plume is visible in the river from ditch outlet.**



**Flag L07**



**Left bank looking upstream. Guinea grass grows on slumped bank adjacent to guard rail.**



**Left bank looking inland (south).**



**Left bank looking downstream. Guinea grass and Java plum grow on slumped bank adjacent to guard rail.**



**View looking north into Hanalei River.**

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## Attachment B

Wetland determination data form and  
wetland photographs

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# WETLAND DETERMINATION DATA FORM—Hawai'i and Pacific Islands

Project/Site: Hanalei River Bank Stabilization Project City: Hanalei Sampling Date: 01/06/2022 Time: 11:15 a.m.

Applicant/Owner: HDOT-K State/Terr./Comm.: Hawaii Island: Kauai Sampling Point: SP-01

Investigator 1: Susan Burr Investigator 2: Bryson Luke TMK/Parcel: (4) 5-4-004:030

Landform: coastal floodplain Local relief: concave

Lat: 21 deg 12 min 31.54 sec N Long: 159 deg 28 min 57.72 sec W Datum: WGS 184 Slope (%): 3

Soil Map Unit Name: Hanalei silty clay, deep water table, 0-6% sl NWI classification: upland

Are climactic/hydrologic conditions on the site typical for this time of year: Yes ☒ No ☐ (If no, explain in Remarks)

Are Vegetation ☒, Soil ☐, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒

Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS—Attach a site map showing sampling point locations transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Remarks: Located in a roadside verge that is regularly mowed.  
Located in the floodplain of Hanalei River and floods often.  
Earthen berms are present on left side of Hanalei River.

A problematic hydric soil -- fluvial sediments within a floodplain.  
This soil pedon likely lacks hydric soil indicators due to seasonal deposition of new soil material.

## VEGETATION—Use scientific names of plants.

Tree Stratum (Plot size: <u>10-m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. None		No <input type="checkbox"/>	Select <input type="text"/>
2.		No <input type="checkbox"/>	Select <input type="text"/>
3.		No <input type="checkbox"/>	Select <input type="text"/>
4.		No <input type="checkbox"/>	Select <input type="text"/>
5.		No <input type="checkbox"/>	Select <input type="text"/>
0 = Total Cover (sum)			

Sapling/Shrub Stratum (Plot size: <u>1-m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. None		No <input type="checkbox"/>	Select <input type="text"/>
2.		No <input type="checkbox"/>	Select <input type="text"/>
3.		No <input type="checkbox"/>	Select <input type="text"/>
4.		No <input type="checkbox"/>	Select <input type="text"/>
5.		No <input type="checkbox"/>	Select <input type="text"/>
0 = Total Cover (sum)			

Herb Stratum (Plot size: <u>1-m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. Megathyrsus maximus	20	Yes <input type="checkbox"/>	FAC <input type="text"/>
2. Eleusine indica	10	Yes <input type="checkbox"/>	FACU <input type="text"/>
3. Commelina diffusa	5	No <input type="checkbox"/>	FACW <input type="text"/>
4. Ipomoea triloba	4	No <input type="checkbox"/>	FAC <input type="text"/>
5. Urochloa mutica	3	No <input type="checkbox"/>	FACW <input type="text"/>
6. Desmanthus pernanbucanus	3	No <input type="checkbox"/>	FACU <input type="text"/>
7. Ludwigia octovalvis	3	No <input type="checkbox"/>	OBL <input type="text"/>
8. Ageratum conyzoides	2	No <input type="checkbox"/>	FAC <input type="text"/>
50 = Total Cover			

Woody Vine Stratum (Plot size: <u>10-m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. None		No <input type="checkbox"/>	Select <input type="text"/>
2.		No <input type="checkbox"/>	Select <input type="text"/>
0 = Total Cover			

Remarks: 50% of plot is bare soil, apparently bare due to flooding.  
Roadside verge is regularly mowed.

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>3</u>	x 1 <u>3</u>
FACW species <u>8</u>	x 2 <u>16</u>
FAC species <u>26</u>	x 3 <u>78</u>
FACU species <u>13</u>	x 4 <u>52</u>
UPL species <u>0</u>	x 5 <u>0</u>
Column Totals: <u>50</u> (A)	<u>149</u> (B)
Prevalence Index = B/A = <u>2.98</u>	

## Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain in Remarks or in the delineation report)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐



**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches)	Color	(moist)	%	Color (moist)	%			
<1	10YR 2/1		100	None	0	Select	Select	Muck
						Select	Select	Select
<1 - 14	10YR 3/3		98	5YR 4/6	2	C	M	Silty Clay Loam
						Select	Select	Select
14 - 16	10YR 3/3		100	None	0	Select	Select	Silty Clay Loam
						Select	Select	Select
						Select	Select	Select
						Select	Select	Select

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators:**

select

Histisols (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Muck Presence (A8)

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Gleyed Matrix (S4)

select

Sandy Redox (S5)

Dark-Surface (S7)

Loamy Gleyed Matrix (F2)

Depleted Matrix (F3)

Redox Dark Surface (F6)

Depleted Dark Surface (F7)

Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

select

Stratified Layers (A5)

Sandy Mucky Mineral (S1)

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: gravel

Depth (inches): 16

Hydric Soil Present:

Yes ☒No ☐**Remarks:**

The few redox concentrations that are present are on bottoms of coarse fragments.

**HYDROLOGY****Wetland Hydrology Indicators:** (Explain observations in Remarks, if needed.)

Primary Indicators (minimum of one required: check all that apply)

select

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Inundation Visible on Aerial Imagery (B7)

Water Stained Leaves (B9)

select

Aquatic Fauna (B13)

Tilapia Nests (B17)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tiled Soils (C6)

Thin Muck Surface (C7)

Fiddler Crab Burrows (C10) (Guam, CNMI, a

Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**

select

Surface Soil Cracks (B6)

Sparsely Vegetated Concave Surface (B8)

Drainage Patterns (B10)

Dry-Season Water Table (C2)

Salt Deposits (C5)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

Shallow Aquitard (D3)

FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): >16

Water Table Present? Yes ☐ No ☒ Depth (inches): >16

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): >16

Wetland Hydrology Present?

Yes ☒No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Located in the floodplain of Hanalei River and likely floods yearly.

Standing water that contains aquatic insects and bullfrog tadpole is present to the southwest of SP-1.



**Fluvial sediments at SP-1 do not display strong characteristics of hydric soils.**



**The sparse plant community is hydrophytic.**



**View looking east. The wetland is located between the earthen berm on the left bank of Hanalei River and Kūhiō Highway.**



**View looking west. The wetland is located between the earthen berm on the left bank of Hanalei River and Kūhiō Highway.**

# APPENDIX D

## CULTURAL IMPACT ASSESSMENT

BY INTERNATIONAL ARCHAEOLOGY, LLC.





— *Final* —

Cultural Impact Assessment in Support of a Hanalei River  
Streambank Stabilization Project, Kūhiō Highway (State  
Route 560) at Mile Post 1.7, Hanalei Ahupua‘a, Halele‘a  
Moku, Mokuupuni of Kaua‘i

TMK: (4) 5-4-004:030; (4) 5-4-004:030 ROW (Kūhiō Highway); (4) 5-4-004:999 ROW (Kūhiō  
Highway)



*Prepared by:*  
H. Kaumakamanōkalanipō Anae

*Prepared for:*  
State of Hawai‘i Department of Transportation  
Ali‘i‘aimoku Building  
869 Punchbowl Street  
Honolulu, Hawai‘i 96813

*Under Contract to:*  
EKNA Services, Inc.  
1300 Pali Highway, Suite 201  
Honolulu, Hawai‘i 96813



*INTERNATIONAL ARCHAEOLOGY, LLC*  
*MARCH 2025*



— FINAL —

**CULTURAL IMPACT ASSESSMENT IN SUPPORT OF A  
HANALEI RIVER STREAMBANK STABILIZATION PROJECT,  
KŪHIŌ HIGHWAY (STATE ROUTE 560) AT MILE POST 1.7,  
HANALEI AHUPUA‘A, HALELE‘A MOKU, MOKUPUNI OF KAUA‘I  
TMK: (4) 5-4-004:030; (4) 5-4-004:030 ROW (KŪHIŌ HIGHWAY);  
(4) 5-4-004:999 ROW (KŪHIŌ HIGHWAY)**

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March 2025



## ABSTRACT

At the request of the State of Hawai‘i Department of Transportation (HDOT), and under contract to EKNA Services, Inc., International Archaeology, LLC (IA) has prepared this cultural impact assessment (CIA) in support of a proposed Kūhiō Highway Streambank Stabilization project along the Hanalei River streambank on the island of Kaua‘i. The project area falls mostly within the HDOT’s Kūhiō Highway right-of-way (ROW) but will partially overlap a portion of the Hanalei National Wildlife Refuge, which is owned and maintained by the United States Wildlife Service (TMK [4] 5-4-004:030, [4] 5-4-004:030 ROW [Kūhiō Highway], [4] 5-4-004:999 ROW [Kūhiō Highway]). The project area is approximately 0.4 miles west of the Hanalei River Bridge.

Scouring of the Hanalei River has undermined the highway’s subgrade, base course, and asphalt along a 300-foot [91.44 meter] stretch of Kūhiō Highway near mile post 1.7 (between milepost 1 and 2). The proposed project will address present and future threats to the stability and integrity of the highway and provide a safe travel route between Hanalei and Princeville. Project construction work will include demolition of the existing roadway and appurtenances that are affected by the scoured riverbank.

The project area is within the Kaua‘i Belt Road-North Shore section historic district (State Inventory of Historic Places [SIHP] 50-30-02-02334) and near the iconic Hanalei River Bridge (SIHP 50-30-03-00736). Both properties are listed in the National Register of Historic Places.

The CIA for this project includes a cultural and historical archival literature review of the study area and an ethnographic study incorporating oral history interviews with six local consultants. The collected ethnographic data and oral histories were then analyzed for relevant patterns that would identify specific concerns for the study area. Data analysis examined land resources, water resources, cultural practices and beliefs, and the community.

The local consultants were primarily concerned with the frequent flooding of Hanalei Ahupua‘a; a need for alternative transportation routes in the Hanalei area, especially for emergency evacuations; collaboration with cultural organizations and the Native Hawaiian community concerning the planning and possible cultural alternatives for streambank repair; and open access to the Hanalei River. *Iwi kūpuna*, or bones of the ancestors, have reputedly been found at Kānoa Ponds and properties in Hanalei, but none have been reported in the immediate project area.

To address these concerns, the cultural informants recommend that the State of Hawai‘i take the following actions:

1. *Kōkua* to *mālama* and *kilo* the resources and *hau* adjacent to Kūhiō Highway to perpetuate the culture and *mālama* the resources and well-being of the Hanalei River. These commitments will apply only within the HDOT’s jurisdiction (the Kūhiō Highway ROW).
2. Work with the community to find solutions if the proposed project disrupts the use of the Hanalei River.
3. Support consultation with *kanaka* who are willing to work with the State, such as the Sheehan ‘*ohana*, to find solutions to Hanalei’s active issues, including flooding and alternative routes to and from Hanalei.
4. Enlist an archaeological monitor and a cultural monitor to observe all ground-disturbing project work to minimize potential impacts to cultural resources such as *iwi kūpuna*. If



cultural resources are found during project work, a plan will be developed to protect these resources in consultation with cultural stakeholders/organizations and appropriate government agencies.

## ACKNOWLEDGEMENTS

The sharing of *‘ike* and *mana‘o* between people is precious, and it is the *leo* that brings *ola* to the *mo‘olelo*. It is the *leo* of the ethnographic consultants that is required to make this Cultural Impact Assessment (CIA) possible, and therefore *mahalo nui loa* all of you: Patrick Solomon Kamealoha Hanohano Pa-Smith; Juliette (Lia) Kulamanu Sheehan, Aunty Patricia Kuaihelani Wilcox Sheehan, Michael Keola Sheehan, Aunty Naomi Leilani Yokotake, and Mitchell Ka‘anohealani ‘Ālapa.

A very special *mahalo* to the Sheehan *‘ohana* for your gracious hospitality and the use of your meeting space at Hanalei Land Company.



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## **I. INTRODUCTION**

At the request of the State of Hawai‘i Department of Transportation (HDOT), and under contract to EKNA Services, Inc., International Archaeology, LLC (IA) has prepared this cultural impact assessment (CIA) in support of a proposed Kūhiō Highway Streambank Stabilization project along the Hanalei River streambank on the island of Kaua‘i (Figures 1 and 2). The project area falls mostly within the HDOT’s Kūhiō Highway right-of-way (ROW) but will partially overlap a portion of the Hanalei National Wildlife Refuge, which is owned and maintained by the United States Wildlife Service (TMK [4] 5-4-004:030, [4] 5-4-004:030 ROW [Kūhiō Highway], [4] 5-4-004:999 ROW [Kūhiō Highway]) (see Figure 2). The project area is approximately 0.4 miles west of the Hanalei River Bridge.

Scouring of the Hanalei River has undermined the highway’s subgrade, base course, and asphalt along a 300-foot [91.44 meter] stretch of Kūhiō Highway near mile post 1.7 (between milepost 1 and 2). The proposed project will address the present and future threats to the stability and integrity of the highway and provide a safe travel route between Hanalei and Princeville. In 2022, a temporary road alignment was constructed as an emergency measure following the extensive damage caused by the March 2021 flood event.

Based on input from the local community, the HDOT has selected a “vegetated earth reinforced wall and sheet pile hybrid” design for the riverbank stabilization, which will be modified to include a pile cap with a boulderscape finish over the sheet pile for strength and aesthetics. The riverbank stabilization will extend into the river bottom to prevent scouring and undermining of the riverbank, and a concrete “pile cap” extending above the mean water surface elevation by approximately two (2) feet will retain the existing and re-constructed riverbank. The new riverbank will be constructed with a vegetated earth reinforced slope using a “native plant vegetative mat” over geotextile bags filled with planting medium and held in place using a geogrid system. Native plants will be planted into the vegetative mat along the bank to provide a greenscape and minimize erosion of the constructed riverbank.

Project construction work will include demolition of the existing roadway and appurtenances that are affected by the scoured riverbank. A small wetland on the current roadway shoulder will be used as a staging area, but it will be restored and vegetated with native wetland plants prior to completion of construction. The project will include erosion and sediment control measures to minimize the impact of construction activities outside the project area, and other measures to mitigate potential impacts to waterbirds, seabirds and native avifauna.

The project area is within the Kaua‘i Belt Road-North Shore section historic district (State Inventory of Historic Places [SIHP] 50-30-02-02334) and near the iconic Hanalei River Bridge (SIHP 50-30-03-00736) (Figure 3). Both historic properties are listed in the National Register of Historic Places.

## **SCOPE OF WORK**

In accordance with the State of Hawai‘i CIA guidance document (OEQC 1997), the purpose of the CIA is to collect ethnographic and ethnohistorical documentary information for the study area for the purpose of identifying the impacts the proposed activity will have on cultural practices and features associated with the area. The documentary information for this CIA was obtained through a combination of archival research, including Hawaiian-language sources, and an ethnographic study using oral history

interviews with Native Hawaiians and other community members who have expertise about the study area. The information acquired was subsequently evaluated to determine the cultural impacts of the proposed project.

The CIA considered cultural practices and beliefs related to subsistence (e.g., fishing, gathering, and agriculture), habitation, commercial activities, access issues, recreation, and religious/spiritual activities and customs. Traditional cultural practices and beliefs that are essential to the cultural places were recorded.

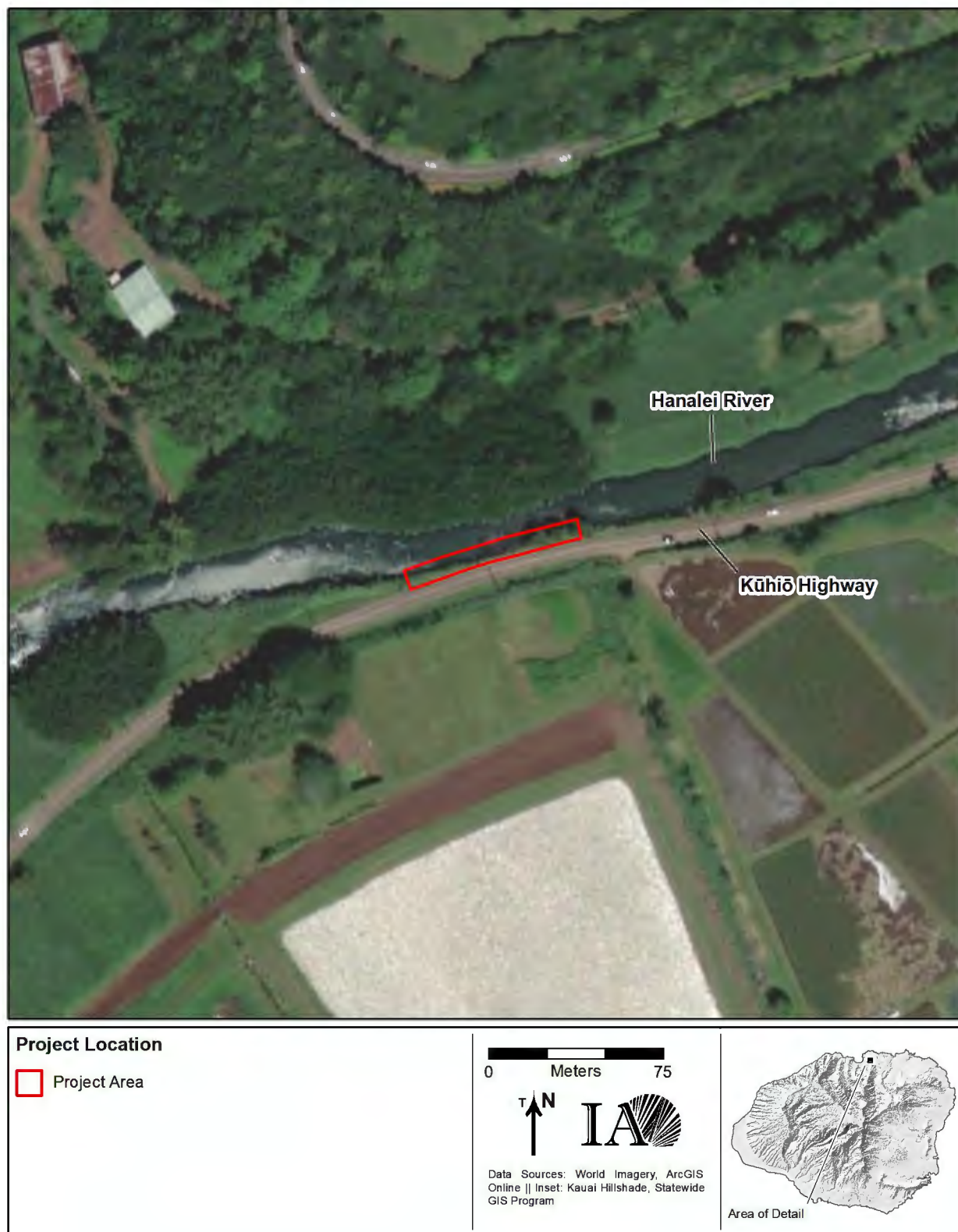


Figure 1. Project area along Kūhiō Highway



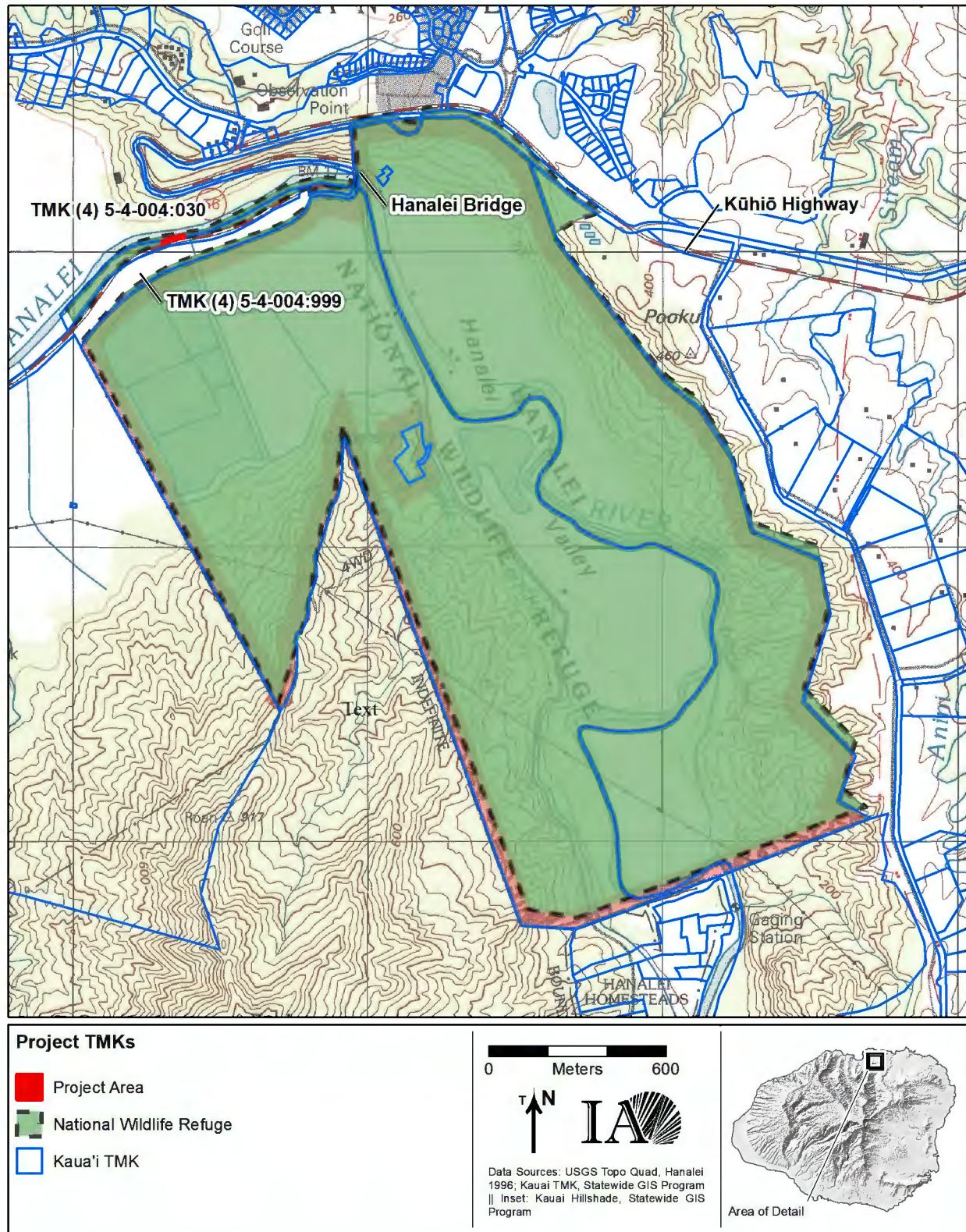


Figure 2. The project area, the Hanalei National Wildlife Refuge, and adjacent TMK parcels.



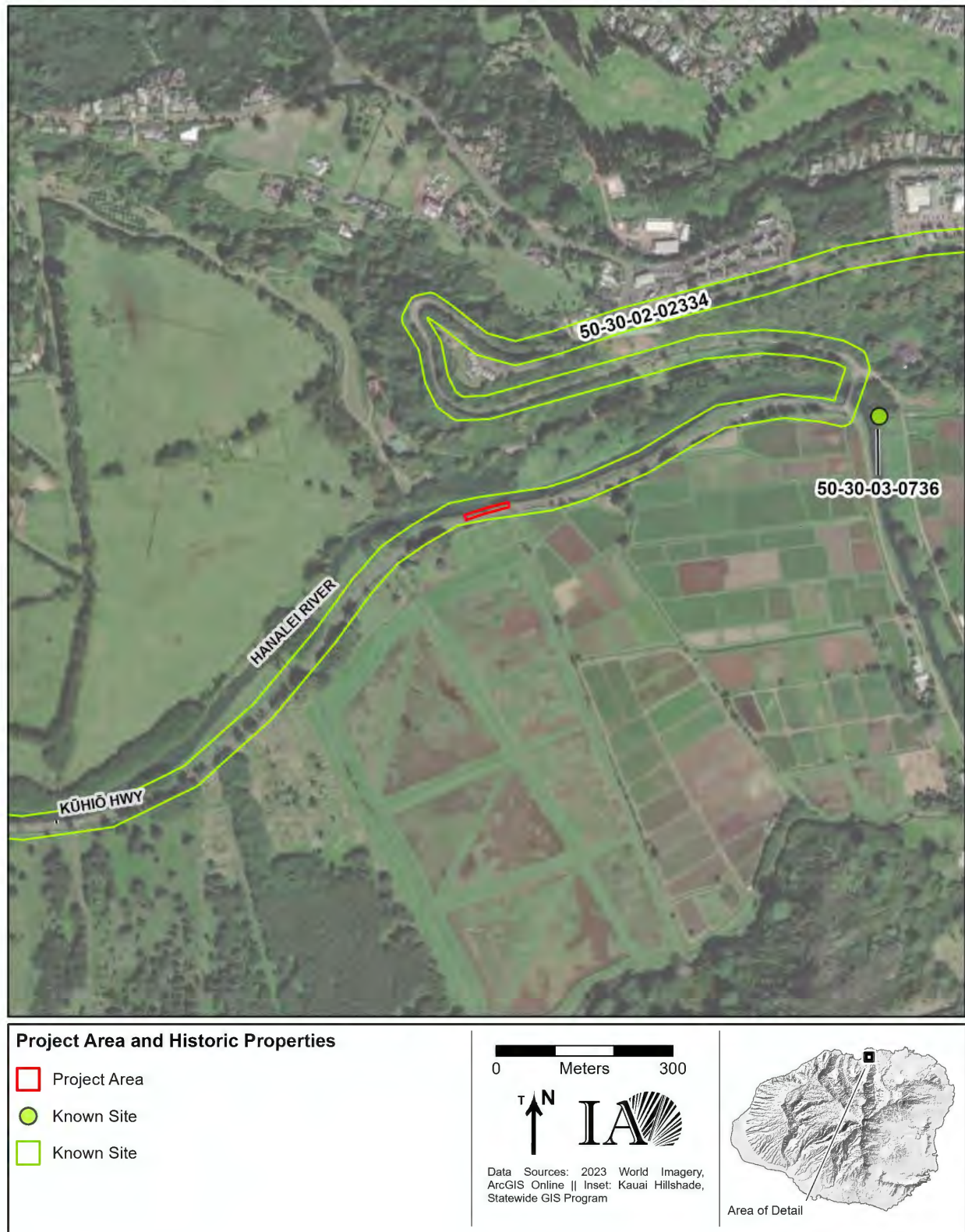


Figure 3. Historic properties near the project area.

## LEGISLATIVE CONTEXT

The CIA was prepared following the methods and recommendations presented in the Office of Environmental Quality Control's<sup>1</sup> *Guidelines for Assessing Cultural Impacts* (1997):

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

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or *ahupua'a*;
2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures on the cultural resources, practices and beliefs identified.

In addition, the portion of the assessment concerning cultural impacts should address, but not necessarily be limited to, the following matters:

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.
2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.
3. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.
4. Biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.
5. A discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should

---

<sup>1</sup> Currently designated the Environmental Review Program within the State of Hawai'i, Office of Planning and Sustainable Development.

include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.

6. A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.
7. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area affected directly or indirectly by the proposed project.
8. An explanation of confidential information that has been withheld from public disclosure in the assessment.
9. A discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.
10. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.
11. A bibliography of references and attached records of interviews which were allowed to be disclosed.

Further, the CIA was conducted to fulfill the expectations of a Ka Pa‘akai o Ka ‘Āina analysis. In 2000, the Hawai‘i Supreme Court, in rulings on the case of *Ka Pa‘akai o Ka ‘Āina v. Land Use Commission* (2000), prescribed a three-pronged framework that addressed failures by the State and its agencies to adequately identify and consider cultural resources, particularly in the form of native Hawaiian customary and traditional practices. The framework is guided by Article XII, Section 7 of the Hawaii Constitution, which dictates that the State and its agencies:

... shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua‘a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.

The analytical framework created a three-part process relative to evaluating potential impacts and requires specific findings and conclusions regarding:<sup>2</sup>

- (1) the identity and scope of “valued cultural, historical, or natural resources” in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
- (2) the extent to which those resources—including traditional and customary native Hawaiian rights—will be affected or impaired by the proposed action; and
- (3) the feasible action, if any, to be taken by the LUC [Land Use Commission] to reasonably protect native Hawaiian rights if they are found to exist.

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<sup>2</sup> *Ka Pa‘akai o Ka ‘Āina v. Land Use Commission* 2000:25.



## STUDY AREA

The area evaluated by the CIA deliberately extends outside the project area to account for any external cultural places or practices that may be connected with or overlap the project area. To this effect, a large portion of Hanalei is included in the CIA, including the coastal areas of Hanalei inland into Hanalei Valley, and the broader Halele‘a *moku*.

The *ahupua‘a* of Hanalei lies on the north side of the *mokupuni* of Kaua‘i in the *moku* of Halele‘a. Present day Hanalei once consisted of four *ahupua‘a*: Hanalei, Wai‘oli, Waipā, and Waikoko (Wichman 1998:108). The very popular Hanalei Bay fronts Hanalei Valley.

For several centuries through the present day, Hanalei Valley has been a popular location for *lo‘i kalo* (taro cultivation) and *poi* manufacturing. Today, many tourists from around the world visit Hanalei Valley to experience the *lo‘i kalo*, surf lessons, surf and paddle boards, shops and eateries.



Figure 4. The CIA study area (including the project area, the coastal areas of Hanalei Ahupuaa and Hanalei Valley) on a 2023 World Imagery orthophotograph.

## **DISPOSITION OF FILES**

Digital copies of biographical data sheets, signed consent forms, interview recordings, and interview transcripts will be permanently curated at the IA office in Honolulu, Hawai‘i.

## **ORGANIZATION OF THE REPORT**

This document includes five sections. Section I introduces the project and presents the scope of work, the legislative context of the CIA, the study area, and the disposition of files. Section II describes the cultural context for the study, including the results of genealogical research, place names, and a review of traditional and historical land and resource use for the study area. Section III presents the methods used to conduct the CIA, including a cultural and historical archival review, an ethnographic study including oral interviews, and data synthesis. Section IV presents the results of the ethnographic review, highlights pertinent excerpts of the oral interviews, and provides a data summary. Section V summarizes the results of the CIA and presents recommendations for future actions. Following Section V is a list of references cited in the CIA and a glossary of Hawaiian words. Appendix A presents the interview consent forms. Appendix B contains the full interview transcripts, and Appendix C is a blank copy of the consultant biography data sheet.

## II. BACKGROUND

This section presents a brief summary of the physical environment, cultural, and historical context of the project area. The information provided in this section includes *mo'okū'auhau* (genealogies), *wahi* (places), *mo'olelo* (traditional literature), traditional land use, and historical land use intended to provide a general context for the CIA.

### PHYSICAL ENVIRONMENT

Formed through numerous volcanic eruptions that occurred approximately 5.6 to 5.0 million years ago, Kaua'i is the eldest of the main islands of Ka Pae 'Āina O Hawai'i (the Archipelago of Hawai'i) and is 33 miles [53.11 km] long and 25 miles wide (Juvik et al. 1998:41; Walden et al. 2014:4; Macdonald and Abbot 1970:5).

Kaua'i has a diverse biota, with tropical rainforests environments, lush valleys, low lying wetlands, rich waterfalls, and some of the longest beaches in all the Hawaiian Islands. The *moku* of Halele'a is one of six *moku* on the *mokupuni* of Kaua'i. It is situated on the north coast of Kaua'i and includes nine *ahupua'a*: Kalihiwai; Kalihikai, Hanalei, Wai'oli, Waipā, Waikoko, Lumaha'i, Wainiha, and Hā'ena. The *moku* stretches to the sandy coral beaches from Mount Wai'ale'ale at the center of the island and skirts the cliffs of the Nā Pali to the west; on the east, it is separated from Puna at the Makaleha Mountains and by the open plains at Ko'olau (Wichman 1998:106). The deep valleys and jagged ridges tell an ancient story of established patterns of erosion in zones of extreme rainfall (Earle 1978:23). Mount Wai'ale'ale once was considered the wettest spot on the earth and is the highest point on the island of Kaua'i. Multitudinous rainfall is known to frequent the *moku*, especially in the *ahupua'a* of Hanalei.

Dubbed as one of the most beautiful bays and valleys in Hawai'i, Hanalei is the largest *ahupua'a* within Halele'a, extending along the Hanalei River to the summit of Wai'ale'ale approximately 11 miles [70.70 km]. The headwaters of the river flow through a narrow mountain valley with scores of tributaries. A great portion of the *ahupua'a* contains mountainous terrain, including the *gardziel* where the Hanalei River descends *makai* (towards the ocean) (Moffat and Fitzpatrick 1995:106). The valley floor is an alluvial flood plain covered with *lo'i kalo* (taro pond fields), and the riverbanks are lined with thickets of *hau* (a wetland tree [*Hibiscus tiliaceus*]). Bordering the alluvial plain to the north is the sandy coastal strip of beach along Hanalei Bay and the outlying fringing reefs (Earle 1978:34). Along the coastal area there are *hala* (pandanus [*Pandanus sp.*]). The alluvial flood plain area is host to several introduced flora such as mango [*Mangifera indica*], guava [*Psidium guajava*] strawberry guava [*Psidium cattleianum*], monkeypod [*Samanea saman*], bamboo [*Bambusa*], *klu* [*Acacia farnesiana*], *koa haole* (a common roadside small tree [*Leucaena leucocephala*]) and *kī* (ti or [*Cordyline terminalis*]). The faunal life found on the plains are wetland birds and cattle (Shapiro and Shapiro 1995:5,7).

Hanalei is well-known for its rains; one of the most common is Ka-ua-loku-o-Hanalei, “soaking rain of Hanalei.” Another rain is the Hehi-pua-hala, or the “stepping upon pandanus flowers.” The plains of Hanalei once were covered with *hala* (pandanus [*Pandanus odoratissimus*]), and the rain also corresponds with Po'okū, a hill above the Hanalei River where a *heiau* once stood. There is also the rain Lena (yellow) that has a yellow tint as it falls in the sunshine. Ka-ua-hā'oa, “gentle rain,” and its showers fall over Hīhimanu like individuals in a chief's court that came in procession of sections or divisions. The favored rain of fishermen is Kū-ula-o-'Anini, “red Kū of 'Anini.” (Wichman 1998:108–109).

Hanalei's winds can be cool or raging. At Hanaleiiki just above the river mouth, there is a gentle breeze called Hau-ka'e'e-o-Hanalei iki, “dried up dews of Hanaleiiki.” There are several winds considered

to be life giving: Hau-mu, “silent dew;” Hau-ōma‘o, “green dew;” or Lū-hau-o-Hanalei-uka “scattered dews of upland Hanalei.” Fishermen felt lucky when the Līhau-o-Lanīhuli, “gentle cool rain of Lanīhuli,” blew over the river or the sea. The unlucky winds were ‘Ō-la-niu-o-Pu‘u Poa, “coconut leaf piercing wind of Pu‘u Poa,” and Pae-hahi-o-ka-iholena, “row of trampled *iholena* banana trees.” (Wichman 1998:108–109).

## MO‘OKŪ‘AUHAU

This section provides genealogy for important ruling chiefs of Kaua‘i. The genealogies, handed down by oral tradition and later recorded for posterity, not only give a glimpse into the depth of the Hawaiian culture of old, they provide a permanent record of the links of notable Hawaiian family lines. *Po‘e kū‘auhau* or genealogy *kahuna* (experts) were very important people in the days of old. They not only kept the genealogical histories of chiefs “but of *kahuna*, seers, land experts, diviners, and the ancestry of commoners and slaves ... an expert genealogist was a favorite with a chief” (Kamakau 1992:242). During the time of ‘Umi-a-Līloa, genealogies became *kapu* (forbidden) to commoners, which is why there “were few who understood the art; but some genealogists survived to the time of Kamehameha and even down to the arrival of the missionaries” (Kamakau 1992:242).

There are several chants from Hawai‘i and other Polynesian islands referred to as migration chants that highlight the travels of ancient Polynesians and not only explain why they traveled from place to place, and where they traveled, but also give their genealogy illustrating how families are connected from one Polynesian island-nation to another. Examples are the chants and stories by Kamakau and Kepelino about Hawai‘i-loa, a famous ancient navigator and discoverer of the islands named after him (PVS 1999).

Surviving genealogies illustrate that the ruling families of each island were interrelated quite extensively. The chiefs of O‘ahu, Kaua‘i, Hawai‘i, Maui, and Moloka‘i had common ancestry. Families branched out but conjoined several times in succeeding generations. O‘ahu’s and Hawai‘i’s chiefs were linked as were Hawai‘i and Maui chiefs, and Hawai‘i’s chiefs were linked to Kaua‘i chiefs (Kamakau 1991:101; McKinzie 1983:xxv). Not only were the chiefs or *ali‘i* related to each other, they were also related to the commoners. In *Ruling Chiefs of Hawai‘i*, Kamakau states that “there is no country person who did not have a chiefly ancestor” (Kamakau 1992:4).

The *mokupuni* of Kaua‘i was once called Kamawaeluālanimoku, the first child conceived by Wākea (Sky Father) and Papa (Earth Mother, also known as Papa-nui-hānau-moku), two of the recognized Hawaiian progenitors. The islands of Kaua‘i, Ni‘ihau, Lehua, and Kaula were the only islands conceived by Papa. An account from the previous historian before Kamahūalele. Kamahūalele, a great prophet and historian, orates the story of Mo‘ikeha who left Tahiti for Hawai‘i with his concubine, Lu‘ukia. They arrived on the shores of Kaua‘i (Fornander 1917:18). Mo‘ikeha ascended from the chiefly line of Nanāulu and Maweke (Fornander 1917:70). After arriving in Kaua‘i he was enamored with the grace and beauty of Ho‘opoikamakanai and Hinau‘u, the daughters of chief Puna. After chief Puna was laid to rest, Mo‘ikeha became the *ali‘i* of Kaua‘i. Mo‘ikeha had at least five male children total with Ho‘opoikamakanai and Hinau‘u.

Approximately five generations later in the 1400’s–1500s, Kūkona was born to father Luanu‘u and mother Kalanimoeikawaikai (Fornander 1880:92). A Hawai‘i Island chief, Kalaunuiohūa invaded several islands in order to unify them under his control. After his victory in Waianae on O‘ahu, he set sail with Kaua‘i in his sights. Kūkona was the *mō‘ī* (king, sovereign) on Kaua‘i during that time. A battle ensued at the coastal area of Kōloa and Kūkona was victorious, capturing Kalaunuiohūa and his fleet who surrendered. Kūkona released everyone but kept Kalaunuiohūa for several years until a negotiation, and Kalaunuiohūa returned to Hawai‘i Island (Fornander 1880:68). Kūkona and his wife Laupuapūama‘a had a son named Manōkalanipō. It is known in Hawaiian culture of several *mō‘ī* or *ali‘i nui* such as

Mānōkalanipō whose reigns are said to be the Golden Ages of their societies as they were *hanohano* (glorious, magnificent) because of their *hana maikaʻi* (good works). He was noted for his *ʻike* and the energy he used to inspire agriculture and industry of which he carried out long and difficult works of irrigation, and consequently brought fields of wilderness under cultivation. Subsequently, no wars disturbed his reign. After his reign and to present day, Kauaʻi is known as “Kauaʻi-O-Manōkalanipō.” One of the sons he had with his wife, Naekapulani, is Kaumakamanō.

At least two to three centuries later, the parents of Chiefess Kamahahei, her father, Kaumeheʻiwa, and her mother, Kaʻapuwai, were living during the time Captain James Cook arrived on Kauaʻi in January 1778, and at that time Kamahahei obtained a second husband, Kaeokulani. Kamahahei’s first husband, Kaneoneo, died during the rebellion against Kahekili on Oʻahu about 1785–1786. Kaeokulani was the younger brother of Kahekili, *mō ʻī* of Maui. Kaeokulani and Kamahahei had a son, Kaumualiʻi. Captain Vancouver mentions in his journal in 1792 that Kaumualiʻi was 14 years old, but he may have been two or three years older (Fornander 1880:298). Kaumualiʻi, chief of Kauaʻi and Niʻihau, exceeded the high expectations of Vancouver and others he encountered in his youth for he was very intelligent and was able to read and write the English language to any extent. He was seemingly handsome and widely beloved by his subjects and foreigners. In 1810, Kaumualiʻi was the last ruler of Kauaʻi before ceding Kauaʻi to Kamehameha I (Alexander 1891:155).

## WAHI

This section discusses the important *wahi* (places) surrounding Hanalei and the *moku* of Haleleʻa, and beyond on the *mokupuni* of Kauaʻi in ancient to modern times. Present day Hanalei once consisted of four *ahupuaʻa*: Hanalei; Waiʻoli; Waipā; and Waikoko. Hanalei is usually translated as “crescent bay,” but its other meaning, “wreath making (or *lei* [garland, wreath, necklace]) valley,” is closer to the original meaning of the name (Wichman 1998:108; Dickey 1934).

The *ʻāina* of Hanalei, land, and people has been known for prolific taro and *poi* production for centuries. The *kalo* is special to Hanalei and the *ʻōiwi* (Hawaiian people) because it is the staple in the Hawaiian diet and of its creation. Wākea the progenitor and his daughter Hoʻohoku-ka-lani or Hoʻohoku-i-kalani produced a child. The child was still born and Wākea named him Hāloanaka-laukapilili, and from his burial a taro shoot sprouted, Hāloa brother to Hāloanaka-laukapilili. The word *palili* also refers to a small weak taro shoot, and a saying exists regarding this word: *He make nō ke kalo, ā ola nō i ke palili*, the old taro stalk is dead, but survives in the shoots (the ancestors are dead, but survive in their offsprings). The *kalo* is somewhat sacred and revered by the *ʻōiwi*. Hāloa, is said to be the ancestor of all Polynesians. Kauaʻi historians assert that a brother of Hāloa settled in Kauaʻi, Chief Ka-māwaae-lua-lani-moku, who was a son of Papa and Wākea. The chief traveled to Kauaʻi with his wife, Kahiki-lau-lani, and two paddlers, Kōnihinihi and Kō-nahenahe. The island of Kauaʻi (“Place of Abundance”) was so named by the people because of the chief’s good deeds, posterity (large number of descendants), and the success of his reign. Kau-aʻi also means “to place around the neck,” in reference to the most favored children who were carried seated on the necks of their parents as a young child (Wichman 2003:3–5; Pukui and Elbert 1969:54, 131, 259, 312).

The *wai* or waters of Hanalei contributes to its *waiwai* or wealth. The Hanalei River is popular for its *loko iʻa*, native biota, including *ʻoʻopu* (goby fish), *ʻōpae* (shrimp), *hīhīwai* or *wī* (mollusks), and for enriching its *loʻi kalo*. Today the river has gained popularity for recreational outdoor activities such as kayaking, paddle boarding, and outrigger canoe paddling. Some still practice *lawaiʻa* (fishing) within its waters and crabbing along its banks.

*Ka po‘e kahiko* (the ancient people), had a very unique relationship with their environment and surroundings, and this bond is apparent in everyday life within their compositions of names for just about everything—people, land divisions, roads, *kauhale* (buildings, houses), *heiau* (temples), *ki‘i* (war images), *lā‘au pālau* (warclubs), *loko i‘a* (fishponds), rocks, fauna, flora, gardens, and *lo‘i*. There once were many names given to the *lo‘i* of Hanalei recognized in the Mahele land documents of 1848.

Table 1 includes place names, translations, information, and locations that were derived from several different sources. Many of the place names and information are sourced from the Mahele of 1848, various land documents (land commission award [LCAw], indices [IN], land commission award book [AB], land commission foreign testimony [FT], board certificate number [BC], Mahele book [MB] board commission testimony [BCT], and the land commission native register [NR]) (OHA Kipuka 2024). The translations of the names were extracted from the 1964 Hawaiian Dictionary by Pukui and Elbert (PE), 1974 Place Names of Hawai‘i by Pukui, Elbert and Mo‘okini (PEM), the Ulukau Online Dictionary and the Ulukau Online Hawaiian Place Names. Land documents were also supplied by the Ulukau Online Māhele Data Base. Several authors are also listed. Locations of places were obtained from registered map number (RM), USGS maps and Google Maps.

The names of *wahi* along with their meaning, sources, location (if available), and a few accompanying *mo‘olelo* (stories) are presented in Table 1



Table 1. Place Names and Cultural Sites Within Hanalei and Surrounding Area.†

Place Name	Meaning* and Source	Location
Aemakamakaole	<i>pu‘u</i> . It is mentioned in No. 8509 a (25-year) lease granted to Charles Titcomb from Kamehameha III and Kuhina Nui Kekāuluohi in 1839. “... and thence onward to a low mound called Aemakamakaole which is S.E. corner ...” (FT 3:22).	Wai‘oli/Hanalei <i>ahupua‘a</i>
Ahau	<i>lo‘i</i> . LCAw 10959 to Waioni. “[Apana] 2. Akahi loi me kula, Ahau ka inoa ...” (“[Parcel] 2. One taro pond field with a field, Ahau [is] the name ...”) TMK 5507:6 (IN 510; AB 4:109).	Wai‘oli <i>ahupua‘a</i>
Aikahala	<i>lo‘i</i> , <i>‘ili āina</i> (division of land) LCAw 10959 to Waioni. “[Apana] 4. Akahi loi maloko o Aikahala ... e pili ana ka loi koele Aikahala ka inoa [on west side] ...” (“[Parcel] 4. One taro pond field inside of Aikahala ... adjoining the taro pond field tended for the chief the name [is] Aikahala. [on west side] ...”) TMK 5508:50x unlocated (IN 510; AB 4:109).	Wai‘oli <i>ahupua‘a</i> . Street that runs west to east from the harbor wharf to the north side of the Kahului Airport runway, ending at Stable Road.
‘Anini	<i>‘ili ‘āina</i> . Lit., dwarfish, stunted. LCAw 8224 to Likuwa. “Maloko Anini, <i>ahupuaa</i> o Hanalei ... Apana 1. Eiwa loi ...” (“Inside Anini, land division of Hanalei ... Parcel 1. Nine <i>lo‘i</i> ...”). TMK 5307:3. Formerly called Wanini. (IN 503; AB 6:163; PEM)	Hanalei <i>ahupua‘a</i>
Hā‘ele‘ele	<i>pu‘u</i> . boundary point. Lit., blackish (BC 1:57; PEM).	Hanalei <i>ahupua‘a</i> . “... little green hill” located between Mo‘okoleaka and Pu‘u Kī on the Hanalei/Wai‘oli boundary.
Hakanawaliwali	<i>‘auwai</i> , <i>‘ili ‘āina</i> . LCAw2660 and 10313 to O. Namauu. “Apana 2. Aina kalo me kula ma ka ili o Hakanawaliwali ...” (“Taro land with field at the land division of Hakanawaliwali ...” Misspelt “Kahanawai” on RM 1833, which shows “Kakonawaliwali auwai” along west side of LCAw 10954-B:2. TMK 5403:por. 7 (AB 8:521).	Hanalei <i>ahupua‘a</i>
Hakualoa	<i>pali</i> . Connects the west side of claim 9081: 2 by Kaupe (FT 12:11).	Wai‘oli <i>ahupua‘a</i> .

Place Name	Meaning <sup>*</sup> and Source	Location
Halaula	<i>pu'u</i> . boundary point. Lit., red pandanus (BC 11 [1:54]; BC 13 [1: 59]; USGS 1963; PEM).	Wai'oli <i>ahupua'a</i> . Elevation 1040 ft. [317 m] at an angle on Forest Reserve boundary; between Kapailu and Mokokama on the Wai'oli/Lumaha'i boundary. Also written Halauloa.
Hālauloa	<i>pu'u</i> , boundary point. Lit., high-born chief's large house. "... to another hill Halauloa ..." (BC 11; BC 13; BC 1:57).	Wai'oli <i>ahupua'a</i> . Between Kapailu and Molokama on the Wai'oli/Lumaha'i boundary. Also written Halaula.
Halele'a	<i>moku</i> and forest reserve, Hanalei district, Kaua'i. Lit., joyful house. One of five ancient districts, from Kalihiwai to Honopu, inclusive. Now merged with Nā Pali to form the modern Hanalei district. Wichman states the literal meaning is "'house of happiness,' has always been cited in chants as the most beautiful place in all the islands." The largest reef s of Kaua'i can be found at the shores of Halele'a and the only true lagoon (PE; King 1935:215; Wichman 1998:106).	One of six <i>moku</i> on Kaua'i. Halele'a blankets a large area from Wai'ale'ale in the center of the island and skirts the district of Nāpali on the west, then stretches to the sea. To the east it is separated from Puna by the Makaleha Mountains and from Ko'olau by an open plain.
Hali'i	<i>mo'o</i> . Claim no. 11059 (TMK 5507:por. 27) by Timoteo. "4 lois in Hali'i Wai'oli." Also written "Hali" in connecting claim no. 10593 (TMK 5508:36) by Pipiwai.	Wai'oli <i>ahupua'a</i>

Place Name	Meaning* and Source	Location
Hanalei	<i>moku, ahupua‘a</i> , river, bay, pier, village, town, elementary school, and homesteads. Lit., crescent bay. Wichman gives light to the original translation given by Lyle Dickey, “wreath making” and “ <i>lei</i> valley.” Hanalei Bay is semicircle-shaped with three beach parks located on the beach—Black Pot, Hanalei Pavilion, and Wai‘oli. There is offshore mooring—designated for a hundred moorings off Hanalei Pier on a sandy bottom at a depth of approximately 35 feet [10.67 m]. The pier is 300 feet [91.44 m] long and was an interisland steamer landing. Originally it was built in the 1890s and later improved with a concrete deck in the 1920. The new deck accommodated the large rice production at the time, but ended in 1933. The pier is now utilized for recreation and fishing. On the west side, there is a surf site for beginners. Surf sites off the Hanalei River mouth is: Impossibles (the takeoff), Flat Rock (the center), and the Bowl (the end). There are three detached sections of homesteads along the Hanalei River (PE; PEM; USGS 1963, Wichman 1998:108, Dickey 1934, Clark 2002:92–93).	<i>Ahupua‘a</i> in the <i>moku</i> of Halele‘a. The town is bisected by the Hanalei and Wai‘oli boundary. Hanalei begins at a channel in the reef shared with Kalihikai; then crosses a wide plain separated with small streams to Kapaka; the border continues to Wai‘ale‘ale towards the roof of the island before joining Lumaha‘i; then it dives across Hihimanu and down the ridge of Kamo‘okoleaka; from there the border follows no geographical feature and goes straight to the sea after crossing a low lying marsh plain. The bay fronts the <i>ahupua‘a</i> of Hanalei, Wai‘oli, Waipā, and Waikoko that is the largest on Kaua‘i; and is a 2-mile [3.22 km] long calcareous sand beach lines the head of the bay between the Hanalei River to the east and the Waikoko Reef to the west. The pier is located to the east end of the bay.
Hanalei iki	<i>‘ili ‘āina</i> . Lit., the small Hanalei. LCAw 4081 to Kalawakea. “Maloko o ka ili o Hanaleiiki...” (“Inside of the land division of Hanaleiiki ...”) Misspelt “Hanaleiki” in IN (IN 504; AB 6:162; PE).	Hanalei <i>ahupua‘a</i>
Hawai‘iloa	surf. Lit., long or distant Hawai‘i (Finney 1959:347; PEM).	Hanalei <i>ahupua‘a</i> . Unlocated surf in Hanalei district.
Hanapo	<i>lo‘i</i> . Claim no. 1001B by Levi: “No. 3 is 1 loi called Hanapo.” (FT 12:23)	Wai‘oli <i>ahupua‘a</i>
Haulepe	<i>mo‘o</i> . Claim no. 9078 and 4073 by Kalakala. “No. 4 is 2 moos called Haulepe and Kanaele.” (FT 12:47)	Hanalei <i>ahupua‘a</i>
Haunoi	<i>kū‘ula</i> . Claim no. 9079 by Pe‘e: “No. 3 is a piece of kula called Haunoi.” (FT 12:12)	Wai‘oli <i>ahupua‘a</i>

Place Name	Meaning* and Source	Location
Ho‘ope‘a	surf. Lit., probably, to cross (Finney 1959:347; PEM).	Hanalei <i>ahupua‘a</i> . Unlocated surf in Hanalei district.
Hukiko	<i>lo‘i</i> , brook. Hukiko is mentioned in No. 8509 a (25-year) lease granted to Charles Titcomb from Kamehameha III and Kuhina Nui Kekāuluohi in 1839. “... from thence running along the western border of the taro ponds and the brook Hukiko until it joins the river Hanalei which is N.E., corner ...” (FT 3:22)	Hanalei <i>ahupua‘a</i>
Ka‘aiho‘onu‘u	<i>‘ili ‘āina</i> . LCAw 9261 to Kaniela. “Apana 3. Akahi loi Kaaihoonuu ...” (Parcel 3. one <i>lo‘i</i> [at] Ka‘aiho‘onu‘u). Written “Kaaihonu” in FT 12:42. Misnumbered 9161 in IN. (In 510; AB 4:4311.)	Wai‘oli <i>ahupua‘a</i>
Ka‘ala	<i>lo‘i</i> . Claim no. 9276 by Kiolea. “No. 3 is 4 lois called <i>lo‘i</i> . Claim no. 1001B by Levi: “No. 3 is 1 loi called Hanapo.” (FT 12:5; PE; PEM)	Wai‘oli <i>ahupua‘a</i>
Ka‘aikahala	<i>loko i‘a</i> . Claim no. 9152 by Kaukualii. “No. 1 is a fishpond called Kaaikahala.” (FT 12:4)	Wai‘oli <i>ahupua‘a</i>
Ka‘apahu	stream. Hanalei. Lit., the truncation (USGS 1963; PEM).	Hanalei <i>ahupua‘a</i> . Rises at 1960 ft. [597.41 m] elevation, enters Hanalei River about 390 ft. [118.87 m] elevation.
Ka‘āpiki	<i>mo‘o</i> . Lit., the rogue, rascal. Claim no. 9078 and 4073 by Kalakala. “No. 1 is a house lot in Kaapiki ... in the midst of land lately give to Mr. J. Kellitt by an Allodial Title [RPG100; TMK 5405:6].” (FT 12:47; PE)	Hanalei <i>ahupua‘a</i>
Ka‘āpoko/ Ka‘apoku	<i>heiau</i> , stream. Lit., the short stone. Bennett’s site 142. “... inland from Site 141 in Hanalei Valley. This small shrine consists of a paved platform 18 by 20 ft. [5.49 m to 6.10 m] made of rough stones. A village was across the stream.” Kaapolo, possible correct spelling. (Bennett 1931:134; PEM; USGS 1963)	Hanalei <i>ahupua‘a</i> . The <i>heiau</i> is located in Hanalei Valley consisting of a platform with a paved surface. The stream rises at about 2,450 ft. [746.76 m], enters Hanalei River at about 645 ft. [196.60 m].

Place Name	Meaning* and Source	Location
Ka‘awakō	<i>heiau</i> . Lit. dragged along ‘awa. (Bennett 1931:50, 153; PEM)	Wailua <i>ahupua‘a</i> . Located on the south shore of the lake of Wai‘ale‘ale. It is a small shrine approximately 500 ft. [152.40 m] northeast of Waialeale summit.
Kahalike	<i>mo‘o</i> . Claim no. 8125 by Hanaimoa: “No. 3 is a loi in Kahalike, Hanalei.” (FT 12:44)	Hanalei <i>ahupua‘a</i> .
Kahe	<i>‘ili ‘āina</i> . Lit., flow. Claim no 10855 by Wahineiki. “No. 2 is 1 loi in the ili Kahe.” (FT 12:53; PEM)	Hanalei <i>ahupua‘a</i>
Ka‘ina	<i>‘ili ‘āina</i> . Lit., the sea urchin. LCAw 10594 to Papa. “[Apana] 1. Pahale maloko o ka ili o Kaina ...” Misspelt “Haina” in IN. TMK 5502:106. Also, LCAw 3663 to Makole. (AB 6:24; FT 12:40; RM 1833; PEM)	Hanalei <i>ahupua‘a</i>
Kaiulu	<i>lo‘i</i> . LCAw 10564 and 2960 to D. Oleloa. “Apana 2. Akahi loi ‘Kaiulu’ ka inoa ...” (“Parcel 2. One lo‘i the name [is] Kaiulu ...”) (IN 510, AB 8:519)	Wai‘oli <i>ahupua‘a</i> .
Kaiwa	stream. Lit., the frigate bird. (PEM; USGS 1963)	Hanalei <i>ahupua‘a</i> . The north fork rises at 2,000 ft. [609.60 m] elevation, enters Hanalei River at about 510 ft. [155.45 m]
Kalapa	boundary, point, and rock. Lit., the ridge. (BCT 1:56; PE)	Wai‘oli <i>ahupua‘a</i> . “The boundary of Wai‘oli commences on the east side of the Wai‘oli River at a stone in the see called Kalapa ...”
Kalena	<i>‘ili ‘āina</i> . Lit., the lazy one. LCAw 10074 to Mana. “Apana 1. Pahale maloko o ka ili o Kalena ...” (“Parcel 1. A house lot inside the land division of Kalena”). TMK 5508: 11. (IN 510; AB 8:250)	Wai‘oli <i>ahupua‘a</i>
Kalihikai	<i>ahupua‘a</i> . Lit., seaward Kalihi. Retained by Aaron Keali‘iahonui, LCAw 11215, at the Mahele. (MB 137; IN 67, 505; PEM; USGS 1963)	<i>Ahupua‘a</i> in the <i>moku</i> of Halele‘a.
Kalihiwai	<i>ahupua‘a</i> . Lit., Kalihi [with a] stream. Retained by Lunalilo, LCAw 8859-B:39, at the Mahele. (MB 27; IN 78, 506; PEM; USGS 1963)	<i>Ahupua‘a</i> in the <i>moku</i> of Halele‘a.

Place Name	Meaning* and Source	Location
Kaliko	<i>pu'u</i> . (USGS 1963)	Hanalei <i>ahupua'a</i> . Between Waipā and the head of Wai'oli on the Hanalei/Wai'oli boundary. Elevation 4, 200+ ft. [1280.16+ m].
Kaluaalo	<i>'ili 'āina</i> . LCAw 10313 and 2660 to O. Namauu. “Apana 1. Pahale maloko o ka ahupuaa o Hanalei ili o Kaluaalo ...” (“Parcel 1. A house lot inside the land division of Hanalei, smaller land division of Kaluaalo ...”). (IN 504; AB 8:521)	Wai'oli <i>ahupua'a</i>
Kāluakanaka	<i>lo'i</i> . Lit., oven-baking man. LCAw 9078 and 4073 to Kalakala. “[Apana] 3. Akahi loi, Kaluakanaka ka inoa ...” ([Parcel] 3. One <i>lo'i</i> , the name Kāluakanaka ...”). (AB 6:159; PEM)	Hanalei <i>ahupua'a</i>
Kaluanui	<i>lo'i</i> . Lit., the big pit. LCAw 8125 to Hanaimoa. “Apana 1. Akahi loi, Kaluanui ka inoa ...” (Parcel 1. One <i>lo'i</i> , the name Kaluanui ...”). (IN 504; AB 8:1249; PEM)	Hanalei <i>ahupua'a</i>
Kalua'o'opu	<i>mo'o</i> . Lit., the 'o'opu [goby] hole. Claim no. 9273 by Kawahine. “No.3 is 2 lois in Kauluaopu.”. (FT 12:32)	Wai'oli <i>ahupua'a</i>
Kama	<i>'ili 'āina</i> . Lit. child. LCAw 10325 to Nunu. “Apana 2. Pahale maloko o ka ili o Kama ...” (“Parcel21. A house lot inside the land division of Kama ...”). (IN 504; AB 4:398; RM 1833; PEM)	Hanalei <i>ahupua'a</i>
Kamanui	<i>lo'i</i> . LCAw 9278 to Kuaua. “Apana 2. Akahi loi maloko o Wai'oli 'Kamanui' ka inoa ...” (Parcel 1. One <i>lo'i</i> in Wai'oli, name Kamanui). (AB 6:331).	Wai'oli <i>ahupua'a</i>
Kamaunui	<i>lo'i</i> . Lit., the big fern. LCAw 9278 to Kuaua. “No. 3 is loi called Kamaunui.” Also claim no. 10074:2 by Mana. (FT 12:24; PE)	Wai'oli <i>ahupua'a</i>
Kamo'o Koleaka	<i>pu'u</i> . boundary, point. (BCT 1:57; RM 1833; TM 5600)	Hanalei <i>ahupua'a</i> . A hill between Manolau and Pu'u Kī on the Hanalei/Wai'oli boundary. Elevation 245 ft. [74.68 m]. Also written “Mookoleaka” (BCT and “Mokoleaka Ridge”)

Place Name	Meaning* and Source	Location
Kamo‘omaika‘i	<i>pā hale</i> . “Commencing at lime tree, at southeast corner of Kamoomaikai, J. Kellitt’s dwelling house lot ...” TMK 5404:por. 9; or 8? (RPG 99 [1:200]).	Hanalei <i>ahupua‘a</i> .
Kanaele	<i>mo‘o</i> . Lit., the bog. LCAw 9078 and 4073 to Kalakala. “[Apana] 4. Alua moo kalo, Kaulipi me Kanaele ka inoa ...” “[Parcel] 4. Two taro land, the name Kaulipi and Kanaele...”). (AB 6:159; PEM)	Hanalei <i>ahupua‘a</i>
Kānaeae	<i>pu‘u</i> . boundary, point, and rock. Lit., chanted supplicating prayer. (BCT 1:57; PE)	Wai‘oli <i>ahupua‘a</i> . “... to peak Kaneanea, the extreme point of western (southern ?) boundary of this land.” Between Mokokama and Pu‘u Kokala on the Wai‘oli/Lumaha‘i boundary; 4421 ft. [1347.52 m] top of Manolokama Mountain.
Kānoa	<i>loko</i> , ‘ <i>ili</i> ‘ <i>āina</i> . Lit., bowl (bowl for kava). LCAw 7642 to Kahanuala. “Pahale maloko o Kanoa, ahupuaa o Hanalei, Halelea, Kauai.” (“House lot is inside of Kanoa, land division of Hanalei, Halele‘a, Kaua‘i.”). Also, LCAw 4076. The name is also applied to a <i>loko</i> (pond) and a brook (IN 50, AB 6:330, FT 12:51 [claim 4076], PEM).	Hanalei <i>ahupua‘a</i> . In Hanalei town, north of Kūhiō Highway and east of Aku Road and Papio Place.
Kānoaiki	‘ <i>ili</i> ‘ <i>āina</i> . Lit., little <i>kānoa</i> (bowl). LCAw 10954 to Waiahu. “Pahale maloko o ka ili o Kanoaiki ...” (IN 504; AB 7:456; PE).	Hanalei <i>ahupua‘a</i>
Kanupo	<i>lo‘i</i> , <i>kō‘ele</i> . Connecting <i>mauka</i> side of claim no. 9261:3 by Kaniela at Kuaikala. (FT 12:42)	Wai‘oli <i>ahupua‘a</i> .
Kaohe	‘ <i>ili</i> ‘ <i>āina</i> . Lit., the bamboo. LCAw 9136 to Kiniakapo. “Maloko o ka ili o Kaohe, Waioli, Halelea, Kauai.” (“Inside the land division of Kaohe, Wai‘oli, Halele‘a, Kaua‘i.”). TMK 5508:43x unlocated. Also, RPG 88 to Koi, TMK 5508:5; claim no. 9274:2 by Kuheleloa. TMK 5508:1; claim no. 8124:1 by Helepalala. TMK 5508:3. Misspelt “Kaohi” in IN and AB 6:27. (IN 510; AB 6:27; GR1; PEM)	Wai‘oli <i>ahupua‘a</i>
Kaohi	<i>lo‘i</i> , LCAw 9274 to Kahaleloa. “[Apana] 1. Akahi loi, Kaohi ka inoa me kula ...” “[Parcel] 1. One lo‘i, the name Kaohi with field.”) TMK 5508:1. Misspelt. See Kaohe (IN 510; AB 6:16).	Wai‘oli <i>ahupua‘a</i>



Place Name	Meaning <sup>2</sup> and Source	Location
Ka'ōhi'a	<i>mo'ō</i> . Lit., 'ōhi'a tree. LCAw 4083 and 9137 to Kealaiki. "Apana 1. Aina kalo maloko o ka mo'ō o Kaohia ..." ("Parcel 1. Kalo land inside of the small division of Kaohia ...") (IN 504; AB 4:417; RM 1833; PE).	Hanalei <i>ahupua'a</i> . The <i>mo'ō āina</i> is northeast of the project area, as shown on DWG No 3112, Tax Maps Bureau, By F. W. B. and H. N. Nov 1936.
Kaoloolo	<i>pali</i> . Claim no. 8125 Hanaimoa. "No. 4 is some kula on the pali called Kaoloolo ..." (FT 12:44).	Hanalei <i>ahupua'a</i>
Kaopai	<i>lo'i</i> , LCAw 9280 and 4025 to Kawainui. "[Apana] 1. Maloko o ke ahupuaa o Waioli, Halelea, Kauai. Akahi loi Kaopai ka inoa ... e pili ana i ka loi Luha ka inoa ..." "[Parcel] 1. One lo'i, the name Kaohi with field.") TMK 5508:29. Misspelt. Probably variant spelling of Kaopae. (AB 6:22).	Wai'oli <i>ahupua'a</i>
Kapailoli	<i>lo'i</i> . LCAw9081 to Kaupe. "Apana 1. Ekolū loi o 'Kapailoli' ka inoa ..." ("Parcel 1. 'Kapailoli' [is] the name of my three lo'i ..." (IN 510; AB 8:248).	Wai'oli <i>ahupua'a</i>
Kapailu	<i>pu'u</i> , boundary point. (BCT 1:57; USGS 1963)	Waipā <i>ahupua'a</i> . Between Mahina Kehau and Māmalahoa on the Waipā/Lumaha'i boundary stated by USGS, but Boundary Certificate 13 places between Neki [Māmalahoa] and Namolokama.
Kapailu	<i>pu'u</i> , boundary point. (USGS 1963)	Wai'oli <i>ahupua'a</i> . "... a long ridge to little hill called Kapilu ..." between Neki and Halauloa on the Wai'oli/Lumaha'i boundary. USGS 1963 locates this name on the Waipā/Lumaha'i boundary at elevation 2,000 ft. [609.60 m]
Kapalikea	<i>pu'u</i> , boundary point. Lit., the white cliff. (PE; USGS 1963)	Wai'oli <i>ahupua'a</i> . Between Waiokihī and Māmalahoa on the Wai'oli/Waipā boundary; junction of Forest Reserve boundary. Also referred to as "Palikea."

Place Name	Meaning <sup>*</sup> and Source	Location
Kapana‘a	<i>‘ili ‘āina</i> . LCAw 10308 to Nalimanui. “Apana 2. Pahale maloko o ka ili o Kapanaa ...” (“Parcel 2. House lot inside the land division of Kapana‘a.”) TMK 5505:7, 28. (IN 510; AB 4:429)	Wai‘oli <i>ahupua‘a</i>
Kapanoa	<i>‘ili ‘āina</i> . LCAw 4075 to Koi and Kapela. “Maloko o ka ili o Kapanoa. Ka pahale ...” [AB] (“Inside the land division of Kapanoa. The house lot ...” [AB]) “... o Kapuaa ka inoa o keia pahale.” [NR] (Kapua‘a is the name of this house lot.” [NR]). TMK 5505:7, 25, 26. (IN 510; AB 6:20; NR 9:96)	Wai‘oli <i>ahupua‘a</i>
Kapua‘a	<i>pāhale</i> . Lit., the pig. Claim No. 4075 by Koi and Kapela. “O Kapuaa ka inoa o keia pahale ...” (“Kapua‘a is the name of this house lot ...”). in the <i>ili</i> of Kapanoa. TMK 5505:7, 35, 26. (NR 9:96; PE)	Wai‘oli <i>ahupua‘a</i>
Kapuaoa	boundary point, place (BCT 1:56).	Wai‘oli <i>ahupua‘a</i> . “... a place on the river bank ...” between Kalapa and Makaihuoa on the Wai‘oli/Waipā boundary.
Kapukawai	<i>‘ili ‘āina</i> . Lit., the water outlet; eye of a coconut. LCAw 9273 to Kawahine. “Apana 3. Akahi loi maloko o ka ili o Kapuoni ...” (“Parcel 3. One lo‘i inside of the land division of Kapuoni ...”). (IN 504; AB 6:161; PE)	Hanalei <i>ahupua‘a</i> . Site of Hihimanu triangulation station. Elevation 1272 ft. [387.71 m].
Kapuoni	<i>‘ili ‘āina</i> . LCAw 9273 to Kawahine. “Apana 3. Akahi loi maloko o ka ili o Kapuoni ...” (“Parcel 3. One lo‘i inside of the land division of Kapuoni ...”). TMK 5507:23. (IN 510; AB 8:254)	Wai‘oli <i>ahupua‘a</i>
Kaukaopua	<i>pu‘u</i> , triangulation station. Lit., the horizon clouds alight. (Mitchell 1930:143; PE; USGS 1963)	Hanalei <i>ahupua‘a</i>
Kaukiuki	<i>‘ili ‘āina</i> . LCAw 10308 to Nalimanui. “Apana 5. Akahi loi maloko o Kaukiuki ...” (“Parcel 5. One lo‘i inside of the Kaukiuki ...”). TMK 5508:51x. (IN 510; AB 4:429)	Wai‘oli <i>ahupua‘a</i>
Kaulipi	<i>mo‘o</i> . LCAw 9078 and 4073 to Kalakala. “[Apana] 4. Alua moo kalo, Kaulipi me Kanaele ka inoa ...” (“[Parcel] 4 two kalo land, the name [is] Kaulipi and Kanaele ...”) (AB 6:159).	Hanalei <i>ahupua‘a</i>

Place Name	Meaning* and Source	Location
Kauloko	<i>lo'i</i> . Claim no. 9147 by Kamakaulii. “No. 3 is 2 lois called Kauloko and Kuhaimoana.” (FT 12:37).	Hanalei <i>ahupua'a</i>
Kauloulu	<i>'āina kalo</i> . LCAw 3819 and 10546 to Puupoa. “Apana 2. Aina kalo ‘Kauloulu’ ka inoa ...” (“Parcel 2. Taro land ‘Kauloulu’ [is] the name ...”). TMK 5404:11x [Erroneously numbered “apana 1” on Tax Map.] (AB 8:521).	Hanalei <i>ahupua'a</i>
Ka'ulu/Kaulu	<i>lo'i</i> . Lit., the breadfruit/the ledge/the grove. Bounds <i>mauka</i> side of claim no. 9069 by Kulou in Wahiawa. (FT 12:10; PEM; PE)	Wai'oli <i>ahupua'a</i>
Kaumaikahiki	<i>mo'o</i> . Claim no. 9273 by Kawahine. “No. 1 is a house lot in Kaumaikahiki.” Also claim no. 10317:1 by Naiwi. Misspelt “Kaunaikahiki” in IN and AB. (FT 12:32)	Wai'oli <i>ahupua'a</i>
Ka'umaka	land division. Lit., give me eye (referring to the cry of two boys who were fond of fish eyes and were killed by a shark sent by a sorcerer). (PEM; 1891 Gay and Robinson [DAGS reg. 2246])	Hanalei <i>ahupua'a</i> . On the west border of Hanalei and Wainiha
Kaumanalehua	<i>pu'u</i> . (USGS 1963)	Hanalei <i>ahupua'a</i> . Elevation 2266 ft. [690.68 m].
Kaumaunui	<i>lo'i</i> . LCAw 10074 to Mana. “Apana 2. Akahi loi o ‘Kaumaunui’ ka inoa ...” (“Parcel 2. One lo'i its name is ‘Kaumaunui’”) Misspelt “Kaunaunui” in IN; awardee's name misspelt “Mama” in IN. TMK 5507:31x. (In 510; AB 8:250)	Wai'oli <i>ahupua'a</i>
Kaumoi	<i>'ili 'āina</i> . LCAw 10308 to Nalimanui. “Apana 3. Kula maloko o ka ili o Kaumoi ...” (“Parcel 3. Field inside of the land division of Kaumoi ...”). (IN 510; AB 4:429)	Wai'oli <i>ahupua'a</i>
Kaunaikahiki	<i>'ili 'āina</i> . LCAw 9273 to Kawahine. “Apana 1. Pahale maloko o ka ili o Kaunaikahiki...” (“Parcel 1. House lot inside of the land division of Kaunaikahiki ...”). TMK 5504:17. Misspelt. See Kaumaikahiki (IN 510; AB 8:254).	Wai'oli <i>ahupua'a</i>
Kaunuopua	<i>'ili 'āina</i> . LCAw 4083 and 9137 to Kealaiki. “Apana 3. Pahale maloko o ka ili o Kaunuopua ...” (“Parcel 1. House lot inside of the land division of Kaunuopua ...”). TMK 5504:2, 3, 4. (IN 504; AB 4:417; RM 1833)	Hanalei <i>ahupua'a</i>

Place Name	Meaning <sup>2</sup> and Source	Location
Kaupana	<i>lo'i</i> , <i>'ili 'āina</i> . LCAw 10956 to Wana. “Apana 1. Akahi loi ‘Kaupana’ ka inoa...” (“Parcel 1. One lo‘i named ‘Kaupana’ ...”). (p. 424). LCAw 3917 to Nahau. “Apana 3. Akolu loi maloko o ka ili o Kaupana ...” (“Parcel 3. Three lo‘i inside the land division of ‘Kaupana’ ...”). (p. 428). TMK 5504:2. (IN 510; AB 4:424, 428)	Wai‘oli <i>ahupua‘a</i>
Ka‘ūpūlehu	<i>pali</i> . Lit., the roasted breadfruit. Borders <i>makai</i> side of claims no. 9284 by Kuapuka and 10648 and 3816 part 2 by Paaiki; Koolau side of claim no. 9078 and 4073 part 4 by Kalakala, 3819 and 10646 part 2 by Puupoa but spelt “Kupulehu”. (FT 12:47–50; PEM)	Hanalei <i>ahupua‘a</i>
Kawaika	<i>lo'i</i> . Lit., the cleared water. Claim no. 10096 by Mareko. “No. 1 is the lois called Kawaika.” (FT 12:9; PE)	Wai‘oli <i>ahupua‘a</i>
Kawailewa	<i>pu'u</i> . Lit., the suspended water. (USGS 1963; PEM)	Hanalei <i>ahupua‘a</i> . Elevation 3300ft [1005.84 m].
Kaweonui	point. Lit., the large redness. Spelt “Haweanui” in BC 18 [1:88] and 31 [1:56].	Hanalei <i>ahupua‘a</i> . A northeast point in the town of Princeville.
Keahakea	<i>'ili 'āina</i> . Lit., Bobea trees and shrubs. LCAw 8124-B to Muno. “Apana 1. Aina kalo maloko o ka ili o Keahakea ...” (“Parcel 1. Kalo land inside of the land division of Keahakea ...”). TMK 5507:40x (IN 510; AB 7:457; PEM).	Wai‘oli <i>ahupua‘a</i>
Keana‘āwī	ridge. (USGS 1965)	Hanalei <i>ahupua‘a</i> . A ridge dividing the headwaters of Ka‘apoko Stream and Hanalei River.
Ke‘eke‘e	<i>lo'i</i> . Lit., Zigzag, angular. Claim no. 9070 by Kaleikini. “No.2 of 3 lois called Keekee.” (FT 12:19; PE)	Wai‘oli <i>ahupua‘a</i>
Keōkea	<i>mo'o</i> . Lit., the white sand (ō is shore for <i>one</i> or sand). Claim no. 19720 by Pukaiki: “in Anini, Hanalei. It is all in one piece, containing house lot, 1 large loko and 5 small lois called Keokea and a piece of kula.” (FT 12:60; PEM)	Hanalei <i>ahupua‘a</i>

Place Name	Meaning <sup>2</sup> and Source	Location
Kenomene	place. (USGS 1963)	Hanalei <i>ahupuaʻa</i> . The feature name is uncertain, but it may be a reef because it is shown on the map off the coast at the northwest side of Princeville.
Kīloa	<i>ʻili ʻāina</i> . Lit., long ti plant. Claim no. 4076 by Kamakaiwa. “No. 3 is 1 loi nui, ili Kīloa. No. 4 is 1 smaller loi, ili Kīloa.” (FT 12:51; PEM)	Hanalei <i>ahupuaʻa</i>
Kīpapa-a-ola	trail. “Trail above Hanalei, Kauaʻi. See Kīkī-a-Ola.” (PEM)	Hanalei <i>ahupuaʻa</i>
Koele	<i>loʻi</i> . LCAw9289 and 4025 to Kawainui. “[Apana] 2. Akahi loi, Koele ka inoa ...” (“[Parcel] 2. One loʻi Koele [is] the name ...”) TMK 5507:5. (AB 6:22)	Waiʻoli <i>ahupuaʻa</i>
Kohi	<i>awaawa</i> . “A small valley called Kohi” bounds the west side of claim no. 9079:3 by Pepee at Haunoi. (FT 12:2)	Waiʻoli <i>ahupuaʻa</i>
Kōlua	<i>loʻi</i> . Connects the <i>mauka</i> side of claim no. 8196 by Hakui at Waikunono. (FT 12:54)	Waiʻoli <i>ahupuaʻa</i>
Kuaiawa	<i>ʻili ʻāina</i> . LCAw 10096 to Mareko. “[Apana] 4. Alima loi paha, maloko o ka Kuaiawa ka inoa o ka ili ...” (“[Parcel] 4. Perhaps five loʻi inside of Kuaiawa the name of the land division ...”). (IN 510; AB 4:117)	Waiʻoli <i>ahupuaʻa</i>
Kuaikala	<i>loʻi</i> . LCAw9261 to Kaniela. “[Apana] 1. Akahi loi, ‘Kuaikala’ ...” (“[Parcel] 1. One <i>loʻi</i> ‘Kuaikala’ ...”) Misspelt “Kuaikale” in IN. TMK 550724. (AB 4:431)	Waiʻoli <i>ahupuaʻa</i>
Kuakahiuu	surf. Lit., standing like a fishing shrine. (Finney 1959:347; PEM)	Hanalei <i>ahupuaʻa</i> . Unlocated surf in Hanalei district.
Kuakea	<i>pali</i> . Lit., faded, light colored. Borders east side of claim no. 9279 by Koa in the <i>ʻili</i> Hanaleiiki. (FT 12:50; PEM)	Hanalei <i>ahupuaʻa</i>
Kuhaimoana	<i>loʻi</i> . Claim no. 9147 by Kamakaulii. “No. 3 is 2 lois called Kauloko and Kuhaimoana.” (FT. 12:37).	Hanalei <i>ahupuaʻa</i>
Kuhia	<i>loʻi</i> . “Mareko’s loi called Kuhia” connects the <i>makai</i> side of claim no. 10594:2 by Papa. (FT 12:40)	Waiʻoli <i>ahupuaʻa</i>

Place Name	Meaning* and Source	Location
Kuhimana	<i>pali</i> , <i>‘āina kalo</i> . LCAw 9278 to Kiolea. “Apana 2. Aina kalo Kuhimana ka inoa ... e pili ana I ka pali o Kuhimana ...” (“Parcel 2. Kalo land name Kuhimana ... connects at the cliff of Kuhimana ...”) TMK 5508:31. (IN 511; AB 8:251)	Wai‘oli <i>ahupua‘a</i>
Kukui	<i>‘ili ‘āina</i> . Lit., candlenut lamp, light of any kind. Candlenut tree. RPG 99 and 100 to J. Kellitt. TMK 5404:9, 13. (GR1; PEM; PE)	Hanalei <i>ahupua‘a</i>
Kulako	<i>lo‘i</i> . Claim no. 9833-B by Pepee: “No. 2 is a loi called Kulako.” (FT 12:30)	Wai‘oli <i>ahupua‘a</i>
Kulima	<i>lo‘i</i> . Bounds east side of claim no. 8268, 8263, and 9264 by Jeremia. (FT 12:30)	Hanalei <i>ahupua‘a</i>
Kuloa	<i>‘ili ‘āina</i> . Lit., long Kū. LCAw 4076 to Kamakaiwa. “[Apana] 3. Aina kalo, aha loi, maloko o ka ili o Kuloa ...” (“[Parcel] 3. Taro land, assemblage [of] <i>lo‘i</i> inside of the land division of Kuloa ...”). (IN 504; AB 7:454; PEM)	Hanalei <i>ahupua‘a</i>
Kuloko	<i>lo‘i</i> . LCAw 9833-B to Pepee. “Maloko o ka ahupuaa o Waioli, Halelea, Kauai. Akahi loi, Kuloko ka inoa ...” (“Inside the ahupua‘a of Wai‘oli, Halele‘a, Kaua‘i. One lo‘i, Kuloko [is] the name ...”) TMK 5507:13 (IN 511; AB 6:21).	Wai‘oli <i>ahupua‘a</i>
Kumulehua	<i>‘ili ‘āina</i> . Lit., lehua tree. “Land called Kumulehua” connects the <i>mauka</i> side of claim 7670 by Kalili. (FT 12:37; PE)	Wai‘oli <i>ahupua‘a</i>
Kumu‘ōhi‘a	<i>‘ili ‘āina</i> . ‘ōhi‘a tree. LCAw 10081 and 3663 to Makole. “Apana 1. Aha loi maloko o Kumohia [sic]. E hoomaka ana I ka pali o Kumuhia ma ka palena o Waioli ...” (“Parcel 1. [Aha] loi inside of Kumohia [sic]. Beginning at the cliff of Kumu‘ōhi‘a at the boundary of Wai‘oli ...”). TMK 5403:1. (IN 504; AB 4:511; PE)	Hanalei <i>ahupua‘a</i>
Kumu‘ulu	<i>lo‘i</i> . Lit., breadfruit tree. LCAw 9280 and 4025 to Kawainui. “[Apana] 5. Akahi loi, Kumuulu ka inoa ...” (“[Parcel] 5. One lo‘i, the name [is] Kum‘ulu.”) TMK 5506:7. (AB 6:23; PE)	Wai‘oli <i>ahupua‘a</i>

Place Name	Meaning* and Source	Location
Kūpākoili	<i>heiau</i> . Lit., to beat down upon. Bennett’s site 144. “... on the west [sic, east] side of the <i>pali</i> west of Wai‘oli Stream, not far from the sea. Thrum say, ‘Reported a small heiau, probably simply a place of offering’” Misspelt “Kupaloili Unu” on Tm 5600. (Bennett 1931:135; TM 5500, 5600; PE)	Wai‘oli <i>ahupua‘a</i>
Kūpākoili	<i>pali</i> . Lit., to beat down upon. <i>Pali</i> of Kūpākoili bounds east side of claim no. 3781 and 10559 part 3 by Opio. (FT 12:13, PE)	Waipā <i>ahupua‘a</i>
Lae Hanaike	boundary point. “... following along right on north foot of <i>pali</i> to large rock at Lae Hanaike, the <i>makai</i> north corner of this land, then following along sea to mouth of Hanalei River ...” (RPG 100 [1:202])	Hanalei <i>ahupua‘a</i>
Lanipoa	‘ <i>ili</i> ‘ <i>āina</i> . LCAw 10317 to Naiwi. “[Apana] 2. 4 loi me kula maloko o ka ili o Lanipoa ...” (“[Parcel] 2. Four <i>lo‘i</i> and field inside of the land division of Lanipoa ...”) TMK 5508:13. (IN 511; AB 6:21)	Wai‘oli <i>ahupua‘a</i>
Limunui	‘ <i>ili</i> ‘ <i>āina</i> . Claim no. 11066 and 3753 by Apolo. “a mookalo in Limunui, Hanalei ... on west side of Loko Kanoa.” (FT 12:40)	Hanalei <i>ahupua‘a</i>
Lohiloliloli	<i>lo‘i</i> . Connects west side of claim no. 4080 by Kahilina in Moaala. (FT 12:52)	Hanalei <i>ahupua‘a</i>
Luha	<i>lo‘i</i> . LCAw 9275 to Koenapuu. “[Apana] 2. Akahi loi Luha ka inoa ...” (“[Parcel] 2. One <i>lo‘i</i> the name [is] Luha ...”). TMK 5508:33. (IN 511; AB 4:116)	Wai‘oli <i>ahupua‘a</i>
Lumaha‘i	<i>ahupua‘a</i> . Retained by Laura Konia, LCAw 5524:7 at the Mahele. “Breadfruit trees here a are said to have been planted by a Menehune named Weli.” (MB21; IN 73, 507; PEM; USGS 1963)	<i>Ahupua‘a</i> in the <i>moku</i> of Halele‘a.
Lupe	<i>lo‘i</i> . LCAw 9081 to Kaupe. “Apana 2. Ehiku lo‘i ‘Lupe’ ka inoa ...” (“Parcel 2. Seven <i>lo‘i</i> the name [is] Lupe.”) TMK 5508:8. (IN 511; AB 8:248)	Wai‘oli <i>ahupua‘a</i>
Mahaaua	‘ <i>ili</i> ‘ <i>āina</i> . LCAw 10325 to Nunu. “Aina kalo me ke kula maloko o ka ili o Mahaaua ...” (“Taro land and the field inside of the land division of Mahaaua ...”). Misspelt “Maahana” on TM 55000 and “Hana” on RM 1833. TMK 5403: por. 1. (IN 504; AB 4:398)	Hanalei <i>ahupua‘a</i>



Place Name	Meaning* and Source	Location
Mahahaualihi	<i>lo'i</i> . Claim no. 10855 by Wahineiki. “No. 1 is 6 lois in ili Mahaaua called Mahahaualihi.” (FT 12:53)	Hanalei <i>ahupua'a</i>
Maahana	On maps misspelt as Ma'ahana and Mahaana; see Mahaaua	
Maika'i	<i>loko</i> . Lit., good. “Loko called Maikai” borders <i>makai</i> side of claim no. 10959:1 by Waioni. Also claim no. 10074:1 by Mana. (FT 12:26; PE)	Wai'oli <i>ahupua'a</i>
Makaihuwa'a	<i>pu'u</i> . boundary point. Phosphorescent light seen in water at night. (USGS 1963; PE)	Wai'oli <i>ahupua'a</i> . Between shore and Waiokihi on the Wai'oli/Waipā boundary.
Makawa	surf. (Finney 1959:347)	Hanalei <i>ahupua'a</i> . Unlocated surf in Hanalei district.
Māmalahoa	<i>pu'u</i> . boundary point. Probably derived from Mamalahoe, the law of the splintered paddle. (USGS 1963; PEM)	Wai'oli <i>ahupua'a</i> . Between Kapalikea and Pu'u Manu on the Wai'oli/Waipā/Lumaha'i boundary; the <i>mauka</i> corner of Waipā. Elevation 3,745 ft. [1141.48 m]. Also known as “Neki or Namalawa”. Maybe a c
Manalau	surf. Lit., many branches. Ancient surf at Wai'oli, Hanalei. (Finney 1959:347, Ii 1963:135, PEM)	Wai'oli <i>ahupua'a</i>
Manu'akepa	<i>mo'o</i> . Claim no. 3781 and 10559 by Opio. “No. 1 is house lot in Mauokepa [sic].” (FT) “ma Waioli ma Manuakepa” (“at Wai'oli at Manuakepa”). (NR) “Land Section, Hanalei Kaua'i.” (FT 12:13; NR 9:89)	Wai'oli <i>ahupua'a</i>
Manolau	boundary point, place. (BC 18 [1:85]; BCT 1:57)	Hanalei <i>ahupua'a</i> . “The Northwest corner of [Hanalei] commences on the sea beach at a place called Manolau ...”
Moa'ala	<i>mo'o</i> . Claim no. 4080 by Kahilina. “No. 2 is 4 lois and some kula in the ili Limanui, Hanalei, called Moaala.” (FT 12:52)	Hanalei <i>ahupua'a</i>
Moakoleaka	<i>mo'o</i> . Claim no. 8273 by Kawahine. “No. 4 is a small piece of kula in Moakoleaka.” (FT 12:32)	Wai'oli <i>ahupua'a</i>
Mokoleaka	ridge. Same as Kamo'o Koleaka (RM 1833; TM 5600).	Hanalei <i>ahupua'a</i>

Place Name	Meaning* and Source	Location
Momona	<i>lo'i</i> . Lit., fertile. LCAw 9833 to Kuaehu. "Akahi loi 'Momona' ka inoa ..." ("One <i>lo'i</i> the name [is] 'Momona ..."). (IN 511; AB 8:250; PE)	Wai'oli <i>ahupua'a</i>
Mo'olulu	<i>mo'o</i> . Claim no. 8268, 8263, and 9264 by Jerremia. "3 lois & some kula adjoining called Moolulu in Hanalei ..." (FT 12:30)	Hanalei <i>ahupua'a</i>
Nāhuhulu'ia	'ili 'āina. Misspelt. LCAw 9147 to Kamakaulii. "Pahale maloko o ka ili o Nahuhuluia ..." ("House lot inside of the land division of Nahuhuluia ..."). Written "Nukuhuluia" on RM 1833. TMK 5403:10. Properly "Nukuhuluii" (IN 505; AB 7:257).	Hanalei <i>ahupua'a</i>
Nākaloaola	place. Lit., the taros of [chief] Ola. (PEM)	Hanalei <i>ahupua'a</i> . Small mountain area above Hanalei, Kaua'i.
Nākīkoniawala'au	<i>heiau</i> . Bennett's site 145. "... in Waioli Uka. Thrum describes it as 'An open, paved space, not large, dedicated to Laka, to which offerings at the annual festival were brought.'" Elevation about 300 ft. [91.44 m]. (Bennett 1931:135; TM 5600)	Wai'oli <i>ahupua'a</i> . Wai'oli Uka.
Nalowale	<i>heiau</i> . Lit., forgotten. Bennett's site 141. "Heiau and house sites, at Kalamaiki, an old village on the river flats, four miles up Hanalei Valley. There is a stone structure 18 by 20 feet with walls all around 2.5 feet wide and 2 feet high ..." (Bennett 1931:134; PE)	Hanalei <i>ahupua'a</i> . An old village of Kalamaiki on the river flats, four miles up Hanalei River.
Namakaokaoha	'ili 'āina. LCAw 10594 to Papa. "[Apana] 2. Akahi loi maloko o ka ili o Namakaokaoha ..." ([Parcel] 2. One <i>lo'i</i> inside of the land division of Namakaokaoha ...). (AB 6:24)	Wai'oli <i>ahupua'a</i>
Namalawa	<i>pu'u</i> , boundary point. Same as Neki and Mamalahoa. (BC 11 [1:54]; BC 13 [1:59])	Wai'oli <i>ahupua'a</i>
Nāmolokama	<i>pu'u</i> , boundary point. Lit. the interweaving bound fast. Also written Molokama. (USGS 1963; PEM)	Wai'oli <i>ahupua'a</i> . A broad flat at the head of Wai'oli <i>ahupua'a</i> . Elevation 4421 ft. [1,347.52 m] at the boundary corner.
Nanihoa	<i>lo'i</i> . LCAw 9833-B to Pepe'e. "[Apana] 3. Akahi loi, Nanihoa ka inoa ..." ("[Parcel] 3. One <i>lo'i</i> the name [is] Nanihoa ...") (IN 511; AB 6:21)	Wai'oli <i>ahupua'a</i>

Place Name	Meaning* and Source	Location
Naoneana	place, boundary point. (BCT 1:57)	Hanalei <i>ahupua'a</i> . "... place on government road" between Manolau and Kuhimana on the Hanalei/Wai'oli boundary.
Nehu	<i>mo'o</i> . Lit., anchovy. LCAw 10648 and 3816 to Paaiki. "Apana 1. Aina kalo, alua moo, Paele me Nehu ka inoa ..." ("Parcel 1. Taro land, two <i>mo'o</i> , Paele and Nehu [are] the names ..."). TMK 5404:12x. (AB 4:119; PEM)	Hanalei <i>ahupua'a</i> .
Neki	<i>pu'u</i> , boundary, point. (BC 11 [1:54]; BC 13 [1:59]; BCT [1:57])	Wai'oli <i>ahupua'a</i> . "... up ridge to junction with Lumaha'i at Neki ..." (BCT) "... to top of peak called Neki or Namalawa ..." (BC 11, 13) Between Kapalikea and Kapailu on the Wai'oli/Waipā/Lumaha'i boundary. The <i>mauka</i> corner of Waipā.
Nounou	<i>'ili 'āina</i> . Lit., throwing. LCAw 10915 to Uloa. "[Apana] 2. Pahale maloko o Nounou ..." ("[Parcel] 2. House lot inside of Nounou ..."). IN 505; AB 4:112; PEM)	Hanalei <i>ahupua'a</i>
Nukuhulu'i'i	<i>'ili 'āina</i> . Claim no. 9147 by Kamakaulii. "No. 1 is houselot in Nukuhuluii." A small stream or brook with a large name, variously written "Nukuhuluia" or "Nahuhuluia". (RM 1833; IN 505; GR 1; RPG 89; FT 12:51)	Hanalei <i>ahupua'a</i>
'Ōniki	<i>'ili 'āina</i> . LCAw 10308 to Nalimanui. "Apana 1. Akahi loi maloko o ka ili o Oniki ..." ("Parcel 1. One <i>lo'i</i> inside the land division of 'Ōniki ..."). TMK 5507:28. Also claim no. 10593:3 by Pipiwai. (IN 511; Ab 4:429)	Wai'oli <i>ahupua'a</i>
Opahale	<i>loko</i> . LCAw 10309 to Naniho. "[Apana] 1. Loko, Opahale ka inoa..." ("[Parcel] 1. Pond, the name Opahale..."). TMK 5508:48x unlocated. (IN 511; AB 6:17)	Wai'oli <i>ahupua'a</i>
Opaillele	<i>'ili 'āina</i> . LCAw 8124-B to Muno. "Apana 1. Pahale maloko o ka ili o Opaillele ..." ("House lot inside of the land division of Opaillele ..."). TMR 5508:39x. (IN 511; AB 8:527)	Wai'oli <i>ahupua'a</i>

Place Name	Meaning <sup>2</sup> and Source	Location
Opukahi	<i>‘ili ‘āina</i> . LCAw 52 to John Brosseau. “John Brosseau’s lot in Opukahi, Hanalei ...” TMK 5501:33, 5. (IN 505; AB 1:172)	Hanalei <i>ahupua‘a</i>
Paele	<i>lo‘i</i> . Lit., dark, black; also, a variety of sweet potato. Claim no. 9070B by Kokokaia. “No. 2 is a loi called Paele.” (FT 12:18)	Wai‘oli <i>ahupua‘a</i>
Palikea	<i>pu‘u</i> , boundary point. Lit., white cliff. Same as Kapalikea. (BCT 1:57)	Wai‘oli <i>ahupua‘a</i> . Between Peapea and Neki on the Wai‘oli/Waipā boundary.
Papiopio	<i>lo‘i</i> . Lit., the young stage of the <i>ulua</i> fish. LCAw 9275 to Koenapuu. “[Apana] 1. Akahi loi Papiopio ka inoa ...” (“[Apana] 1. One <i>lo‘i</i> Papiopio [is] the name ...”). (IN 511; AB 4:116; PE)	Wai‘oli <i>ahupua‘a</i>
Pe‘ape‘a	<i>pu‘u</i> . boundary point. (BCT 1:56)	Wai‘oli <i>ahupua‘a</i> . “... peak called Peapea ...” between Makaihuoa and Kapalikea on the Wai‘oli/Waipā boundary. A triangulation station named “Paepae” on USGS 1963 is located on this peak. Elevation 694 ft. [211.53 m].
Pekoa	stream. (USGS 1963)	Hanalei <i>ahupua‘a</i> . Rises at about 1500 ft. [457.20 m] elevation, enters Hanalei River at about 260 ft. [79.25 m] elevation. A waterfall at 800 ft. [243.84 m] may carry the same name.
Po‘okū	<i>Heiau</i> , <i>pu‘u</i> , vent. Lit., upright head. “Only a few stones remain to mark the location of this heiau which Thrum describes as ‘An unenclosed heiau of about two acres in area. Of luakini class, terraced down on all sides from the central platform.’” In 1887 the Hawaiian Government survey established the Hanalei Latitude Station near the south end of the site. The hill is a vent in the Kōloa Volcanic Series. (Bennett 1931:1334; Mitchell 1930:21, 144; MSCD 1969, PEM; USGS 1963)	Hanalei <i>ahupua‘a</i> . Elevation 460 ft. [140.21 m].
Po‘omau	<i>pali</i> . Lit., contant source or constant head. Pali called Poomau bounds claim no. 10691:2 Naiwi in <i>‘ili</i> Mahaaua. (FT 12:53; PEM)	Hanalei <i>ahupua‘a</i>

Place Name	Meaning* and Source	Location
Princeville Ranch	place. “The area was so named in honor of a visit there in 1860 of Kamehameha IV and Queen Emma and their son, the prince Ka Haku o Hawai‘i. It was then a sugar plantation owned by Robert Crichton (R. C.) Wyllie. Later it became a cattle ranch, and in 1968 it was sold for development.” Formerly called Pu‘u Pehu (Figure 6) (PEM; USGS 1963)	Hanalei <i>ahupua‘a</i>
Puhaunui/ Puhanunui	<i>lo‘i</i> , mountain. LCAw 10316 to Nuku. “Akahi loi Puhanuiu [sic] ka inoa ...” (“One <i>lo‘i</i> Puhanuiu [sic] [is] the name ...”) Written “Puhaunui” in FT 12:28. TMK 5506:1, 2. Puhaunui is mentioned in No. 8509 a (25-year) lease granted to Charles Titcomb from Kamehameha III and Kuhina Nui Kekāuluohi in 1839. “... land extending to the mountain called Puhaunui ...” (FT 3:22).	Wai‘oli <i>ahupua‘a</i>
Puoniauiho	mountain. Puoniauiho is mentioned in No. 8509 a (25-year) lease granted to Charles Titcomb from Kamehameha III and Kuhina Nui Kekāuluohi in 1839. “... and then running in a straight line to a space of the mountain called Puoniauiho ...” (FT 3:22).	Hanalei <i>ahupua‘a</i>
Pu‘u Kakala	<i>pali</i> . Pali of Puu kakala” borders <i>makai</i> side of claim 9136:2 by Kiniakapo. (FT 12:15).	Wai‘oli <i>ahupua‘a</i>
Pu‘u Ki	<i>pu‘u</i> . boundary point. Lit., ti plant hill. Written “Puu Kii” in BCT. (BCT 1:57; PEM; USGS 1963)	Hanalei <i>ahupua‘a</i> . Between Kamo‘o Koleaka and Hihimanu on the Hanalei/Wai‘oli boundary.
Pu‘u Kōkala	<i>pu‘u</i> . boundary point. (BCT 1:57)	Hanalei <i>ahupua‘a</i> . The Hanalei/Wai‘oli boundary passes “round head of [Waioli] valley to commencement of Eastern boundary at a place on a high hill called Puu Kokala ...” Perhaps the same as or near Kaliko.
Pu‘u Lena	surf. Lit., yellow hill. (Finney 1959:347; PEM)	Hanalei <i>ahupua‘a</i> . Unlocated surf in Hanalei district.

Place Name	Meaning* and Source	Location
Pu‘u Manu	<i>pu‘u</i> . boundary point. Lit., bird hill. (PEM; USGS 1963)	Wai‘oli <i>ahupua‘a</i> . Between Mamalahoa and Namolokama on the Wai‘oli/Lumaha‘i boundary. Elevation 3204 ft. [976.58 m]. This name is not found in the Boundary Commission testimony.
Pu‘u O Miki	<i>pu‘u</i> . Lit., Miki’s hill. (PE; USGS 1963)	Hanalei <i>ahupua‘a</i> . A hill on the Halele‘a Forest Reserve boundary. Elevation 480+ ft. [146.30 + m].
Pu‘u Pehu	place. (RM 1833; TM 5400)	Hanalei <i>ahupua‘a</i> . A broad area west of Anini Stream, <i>makai</i> of Hwy 56, mostly occupied by Princeville Ranch (see Figure 6).
Pu‘u Poa	<i>mo‘o</i> . point. Claim no. 4085 for a houselot in Puupoa, Hanalei, ws given up by Kekauanui. (FT 12:230; USGS 1963)	Hanalei <i>ahupua‘a</i> . The point is in Princeville, on the northwest side.
Uhikiko	<i>lo‘i</i> . LCAw 9079 and 3817 to Kahookane.” [Apan] 1. Na loi Uhikiko ka inoa ...” (“[Parcel] 1. The <i>lo‘i</i> (s) Uhikiko [are] the names ...”). TMK 5507:3. (IN 511; AB 4:111)	Wai‘oli <i>ahupua‘a</i>
Ukiuki	<i>lo‘i</i> . LCAw 10316 to Nuku. “[Apana] 3. Akahi loi Ukiuki ka inoa ...” (“[Parcel] 3. One <i>lo‘i</i> Ukiuki [is] the name.”) TMK 5507:21. (IN 511; AB 6:19)	Wai‘oli <i>ahupua‘a</i>
Wahiawa	<i>mo‘o</i> . Lit., milkfish place. Claim no. 9069 by Kulou “in Wahiawa, Waioli.” (FT 12:10; PEM)	Wai‘oli <i>ahupua‘a</i>
Waiau	<i>‘ili ‘āina</i> . Lit., swirling water. LCAw 8124 to Helepalale. “Apana 2. Akahi loi Waiau ka inoa ...” (“Parcel 2. One <i>lo‘i</i> the name is Waiau.”). (IN 511; AB 4:435; PEM)	Wai‘oli <i>ahupua‘a</i>

Place Name	Meaning* and Source	Location
Waiaula	<i>mo</i> ‘o, stream/river. Claim no. 4080 by Kahilinui. “No. 1 is houselot in Waiaula” bordered on the east by the brook Waiaula. Also, claims 7944 and 2660. (FT 12:52). Waiaula is mentioned as a river in No. 8509 a (25-year) lease granted to Charles Titcomb from Kamehameha III and Kuhina Nui Kekāuluohi in 1839. “ ... beginning at the mouth of the river Waiaula ...” (FT 3:22).	Hanalei <i>ahupua</i> ‘a
Waihi	<i>‘āina kalo</i> . Lit., trickling water. LCAw 9078 and 4073 to Kalakala. [Apana] 2. Aina kalo, Waihi ka inoa ...” (“[Parcel] 2. Taro land, Waihi [is] the name ...”). (AB 6:159; PEM)	Hanalei <i>ahupua</i> ‘a
Waikanono	<i>mo</i> ‘o. LCAw 8196 to Hakui. “Maloko o ka ili o Waikanono, Waioli, Halelea, Kauai. [Apana] 1. Moo kalo me kula ...” (“Inside of the land division of Waikanono, Wai‘oli Halele‘a, Kaua‘i. [Parcel] 1. Taro land and field ...”). TMK 5508:6,7. (IN 511; AB 6:18).	Wai‘oli <i>ahupua</i> ‘a
Waikiko	gulch. (RM 1833)	Hanalei <i>ahupua</i> ‘a. On the east bank of Hanalei valley.
Waikoko	<i>ahupua</i> ‘a. Lit., blood water. Retained by Kekauonohi, LCAw 11216:4, at the Mahele. (MB 31; IN 68, 507; PEM; USGS 1963)	<i>Ahupua</i> ‘a in the <i>moku</i> of Halele‘a.
Waikunono	stream. (FT 12: 4, 11)	Wai‘oli <i>ahupua</i> ‘a. “Waikunono creek” borders the west side of claim no. 10309:2 by Naniho. “Pali called Waikunono” borders the <i>mauka</i> side of claim no. 9081:3 by Kaupe at Kapailoli.
Wainiha	<i>ahupua</i> ‘a. Lit., unfriendly water. Retained by Kekauonohi, LCAw 11216:5, at the Mahele. (MB 31; IN 68, 507; PEM; USGS 1965)	<i>Ahupua</i> ‘a in the <i>moku</i> of Halele‘a.
Waiokihi	<i>pu</i> ‘u. boundary point. Not named in the Boundary Commission testimony. (USGS 1963)	Wai‘oli <i>ahupua</i> ‘a. Between Makaihuwaa and Kapalikea on the Wai‘oli/Waipā boundary. Elevation 940 ft. [286.51 m].
Wai‘oli	<i>ahupua</i> ‘a. Lit., joyful water. Returned by Kekauonohi, retained by the <i>aupuni</i> (government) at the Mahele of 1848. (MB 30, 229; IN 44; USGS 1963)	<i>Ahupua</i> ‘a in the <i>moku</i> of Halele‘a.



Place Name	Meaning <sup>*</sup> and Source	Location
Waiopa	<i>place</i> . Lit., crippled water. (USGS 1963). The feature named is uncertain.	Hanalei <i>ahupua'a ahupua'a</i> . “Commencing at stake at bend of Waileia Stream on north edge ...”
Wailē'ia	stream. Lit., abundant water. (TM 5400; RPG 100 [1:202]; PE)	Hanalei <i>ahupua'a</i>
Waipā	<i>ahupua'a</i> , stream. Lit., touched water. The <i>ahupua'a</i> was retained by Princess Ruth Ke'elikolani, LCAw 7716:1, at the Mahele; returned by Kanehoa, retained by the <i>aupuni</i> (government) but annotated “hoihoi ia Ruta” (“returned to Ruth”) in MB 229. (MB 21, 166, 229; IN 67, 511; USGS 1963; PEM)	<i>Ahupua'a</i> in the <i>moku</i> of Halele'a.
Waipunaea	stream. (USGS 1965)	Hanalei <i>ahupua'a</i> . Rises at about 1900 ft. [579.12 m], enters Hanalei River at about 725 ft. [220.98 m] elevation.
Waipuni	<i>pu'u</i> . boundary point. (USGS 1963)	Hanalei <i>ahupua'a</i> . A hill on the Forest Reserve and Homestead boundary. Elevation 400+ ft. [121.92 m].
Wanini	<i>'ili 'āina</i> . Lit., dwarfish, stunted. LCAw 8224 to likuwa. “Maloko Anini, ahupua'a o Hanalei ... Apana 1. Eiwa loi ...:” (“Inside Anini, land division of Hanalei ... Parcel 1. Nine pond fields ...”). TMK 5307:3. Anini was formerly called Wanini. (IN 503; AB 6:163; PEM)	Hanalei <i>ahupua'a</i>

Places of names sourced mainly from USGS maps unless otherwise noted.

\* Adapted from Ulukau: Hawaiian Electronic Library (<https://ulukau.org/index.php?l=en>).

† Most of these place names and translations were derived information and collected from Ulukau (Online): Hawaiian Dictionary (Pukui 1969), Hawai'i Place Names (Pukui and Elbert 1986) and Place Names (Clark 2002) unless noted in the Meaning and Source column.

## MO'OLELO, OLI, MELE, HULA, AND 'ŌLELO NO'EAU

The ethnographic works of the late 19th and early 20th centuries preserve a wealth of *'ike* about traditional literature—the *mo'olelo*, *oli*, and *mele*—and provide glimpses into fragments of time and parts of the Hawaiian culture often forgotten. The *mo'olelo* allow *kūpuna* (ancestors, elders) including the *ka po'e kahiko* to be revived as their personalities, loves, and struggles are realized. The *oli* (chants) and the *mele* (songs) not only give light to the past, special people, and *wahi pana* (legendary places or sites), they also support the breadth of the *'ike* and *mana'o* of the *pūlama* (cherished) *kūpuna* (Orr 2014:20). The *'āina* is considered one of the oldest *kūpuna* and beloved not just for its mere beauty but for the appreciation in providing sustenance for the Hawaiian people. There are a plethora of *mo'olelo*, *oli* and *mele* composed naming and honoring the different *'āina*.

### MO'OLELO NO PELE ME HI'IAKA: PELE MEETS AND FASCINATES LOHIAU

Some of the most prolific *mo'olelo* describe the adventures of Hi'iaka (goddess of the *lehua*, also known at Hi'iaka-i-ka-poli-o-Pele) and Pele (volcano goddess). Most of *nā mo'olelo* (the stories) are individual narratives highlighting Hi'iaka's journey from and to Hawai'i Island to fetch Pele's lover, Prince Lohi'au, on Kaua'i. Having so much *aloha* for her sister Pele, Hi'iaka agrees to the arduous feats and travels. The following account however, is an introduction to the *mo'olelo*, and tells of the meeting of the two lovers, Pele and Lohi'au (Emerson 1915:5–8; Pūku'i and Elbert 1986:216).

Upon traveling on the north side of Kaua'i, Pele had arrived at a *hālau* or meeting hall where people were dancing the *hula*, but no one knows she is Pele, the fiery goddess. As she approached the hall all the people on the outskirts looked at this unexpected stranger in wonderous admiration. As they looked upon this charming visitor with such high regard, they thought, she must be the most beautiful woman in all of Kaua'i, and exude the redolence of the fragrant *hala*, *maile*, and *lehua*. The people made a path to the entrance of the hall for her so she could have full view of the musicians and dancers, and sitting among them was Lohi'au. The expressions of the people changed in apprehension as Pele moved into the room. Pele's eyes were transfixed on Lohi'au, and all was captivated as she entered the room with an *oli*.

Lu'ulu'u Hanalei i ka ua nui, Kaumaha i ka noe o Alaka'i,<sup>3</sup>

Tight-pressed is Hanalei' throng, A tree bent down by heavy rain,

I ka hele ua o Manu'a-kepa, Uoi ku i ka loa o Ko'i-ālana,<sup>4</sup>

Weighed with drops from the clouds, When rain columns sweep through Manu'a-kepa,

I ka alaka'i a ka malihini, e! Mai hina, mai hina au.

This throng that has lured on the stranger! Nigh to downfall, to downfall, was I.

<sup>3</sup> The first line is also defined by Pūku'i and Elbert (1986) as follows: Lu'ulu'u Hanalei i ka ua nui, Kaumaha i ka noe o Alaka'i; Hanalei is downcast with great rains, heavy with mist from Alaka'i (said in dirges to describe the weight of grief).

<sup>4</sup> The second line is also defined by Pūku'i and Elbert (1986) as follows: I ka hele ua o Manu'a-kepa uoi aku i ka loa o Ko'i-ālana (song), the rain journey of Manu'a-kepa, moving at random along the length of Ko'i-ālana.

Mai palaha ia o-e. Imi wale ana au o kahi o ke ola,

Laid flat by your trick—aye yours! My quest was for comfort and life,

O ke ola nei, e-e!

Just for comfort and life!

There was a lingering silence and stillness following Pele's *oli* and all eyes were focused on Prince Lohi'au for a *pane* or answer to the *oli* of Pele. There were a lot of wrinkling of the forehead, nods, and other gestures towards Lohi'au to encourage his voice, and Paoa, his close friend nudged him to initiate a sound. Again, Pele broke the silence with a very poised and confident chant proclaiming Lohi'au as her companion and mate. Lohi'au with great nobility and politeness invited Pele to sit with him and enjoy the food and hospitality of the *hālau*. When asked where she was from, Pele first said she was from Kaua'i, but later said, "I am from Puna, from the land of the sunrise, from Ha'eha'e, the eastern gate of the sun." Lohi'au was enchanted by Pele and forgot his duty as host for the activities at the *hālau*. Both were enthralled and spent several days together. Lohi'au offered food to Pele on several occasions, but she persistently declined all his offers. She also declined his sexual advances and only permitted kisses—even biting Lohi'au on the hand, which he returned in a "fierceness of passion," planting his teeth into her body. Before Pele left Lohi'au's side she informed Lohi'au of the following: (1) she was going back to her home and prepare it for his arrival; (2) she would send for him; (3) he should only leave for his journey to Pele with a female, not a male; (4) for five days and nights, he would get his fill and pleasure of her; (5) and after their encounter, he was free to go with another woman. Pele plunged into the sea and was gone.

### MO'OLELO NO KAWELO O KAUA'I

The *mo'olelo* of Kawelo, *Kawelo of Kaua'i*, compiled by Pūku'i has been written by several authors. Although the story is an epic with contributing sagas, Caroline Curtis summarizes the adventures of Kawelo into a lucid, entertaining narrative and Fornander supports specific details, *wahi*, and *mo'okū'auhau* (Pūku'i 1994:93–117; Fornander 1918:2–71).

On the island of Kaua'i in Hanalei a child of supernatural strength was born, and his name was Kaweloleimakua who we will call Kawelo. He was destined to be a powerful warrior and chief as foretold by his grandparents who raised him. Shortly after Kawelo's younger brother, Kamālama, was born, his grandparents took Kawelo and they all moved to Wailua. Kamālama admired Kawelo and in their teen years to adulthood loyally followed his brother. During his early childhood, the only people Kawelo engaged with was his *'ohana* because he and his brothers belonged to a chiefly high rank and the grandfather enforced the *kapu*.

After Kawelo discovered children existed outside the walls of their home, he became curious. He snuck out of the house one night using a fishing line to play with the children outside. At his first glorious look upon the lands, he thought to himself that he would one day rule all the lands. Parallel to the time of Kawelo's upbringing, Kawelo'aikanaka, who we will call 'Aikanaka, son of the Kaua'i *ali'i*, was also being raised, and so was Kauahoa, the giant of Hanalei. All three of these children were related to each other, born at the same time, and raised together. At the first meeting with 'Aikana, Kawelo challenged him to a spear throwing contest and won. Immediately following the challenge, his grandfather came to take him back to the confines of the high walls of their home.

As time passed Kawelo played with his brothers and did not leave the home. As he grew so did his need for food and his grandparents found it difficult to keep up with his voracious appetite. His grandmother expressed to his grandfather that there was not enough activity to keep Kawelo busy nor would playing with

his younger brothers “satisfy the active boy;” therefore, a canoe was crafted for Kawelo. One day Kauahoa saw Kawelo enjoying his canoe, and he wanted one of his own. Then one day Kawelo saw Kauahoa flying a kite, and Kawelo went home and asked his grandparents for a kite. The two boys enjoyed flying their kites together. One day the boys kites became entangled and Kauaho’s kite broke, flew away, and landed at a distant forest near Kōloa called Kaho’oleināpe’a—to this day the place has the same name. There is also a constellation named for this event.<sup>5</sup> Kawelo was expecting Kauahoa to be angry and fight with him, but Kauahoa sadly blamed the winds for the entangling kites. Although ‘Aikanaka would not let Kawelo nor Kauahoa forget he was son of the ruling chief, the three continued to enjoy together the pastimes of sports, swimming, and stringing *lei*. Kawelo and Kauahoa obeyed ‘Aikanaka, but he was resented by Kawelo. Most of the time Kawelo enjoyed his time with his brothers learning war games. The brothers admired him and praised his skill, especially Kāmālama who really loved him. They built a house for Kāne-of-the-daybreak, who was the family deity, and made offerings and prayers. Secretly, Kawelo prayed to become ruler one day.

Years went by and the father of ‘Aikanaka passed, and ‘Aikanaka became the new ruler. Kawelo did not want to serve ‘Aikanaka and suggested to his grandparents they travel to O‘ahu. They packed their deity, lots of food, and headed for Waikīkī. The entourage met Kakuhihewa, the prominent high chief of O‘ahu whom they lived with in Waikīkī. Kakuhihewa was a strong man and famous wrestler. Kawelo’s older brothers sometimes wrestled with Kakuhihewa but could never throw him down. As time went by Kawelo grew to manhood, started farming, and found himself a wife, Kanewahineikiaoha.

Kawelo’s brothers were talented surfers who surfed at Kalehuawehe, and Kawelo joined them one day. As usual the older boys would surf, wash at ‘Apuakēhau Stream, and head to the shed where wrestling bouts were held. Although forbidden by his grandfather, Kawelo engaged in a bout with Kakuhihewa’s strong man, a man his brothers could never throw. The brothers were not confident of Kawelo’s skill or strength to beat the strong man. But Kawelo with his super strength and skill beat Kakuhihewa’s strong man. The brothers were so embarrassed of their misgivings they went back to Kaua‘i, and Kawelo stayed in Waikīkī with wife and younger brother Kamālama.

Soon after the brothers left, Kawelo began learning the *hula* (Hawaiian dance) but was unable to master the art, and he started learning the art of war from his father-in-law, Kalonaikahailā‘au. Kanewahineikiaoha and Kamālama also joined Kawelo in learning the art of war, and they were also Kawelo’s sparring partners. After mastering the art of war, he acquired skills in fishing with Ma‘akuakeke of Waialae. Kawelo revealed his skill in *oli* when he called Ma‘akuakeke to go fishing with him one day:

E, Ma‘akuakeke,	Say Ma‘akuakeke,
Hoa lawai‘a o Kawelo nei la,	Fishing companion of Kawelo,
E ala, ua ao, ua malamalama,	Wake up, it is daylight, the sun is shining,
Ua hiki ka lā, aia i luna.	The sun has risen, it is up.
Lawe mai nā kīhele makau	Bring along our hooks
Me ka ipu holoholona pū mai	Together with the fishing kit

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<sup>5</sup> Kalupeakawelo (The Kite of Kawelo) is made up of the constellation representing the Great Square of Pegasus. It is a “... square-shared kite that rises from the eastern horizon and flies overhead towards the western horizon. The four stars of the Great Square are named for Hawaiian chiefs; Keawe of Hawai‘i island, Pi‘ilani of Maui, Kakuhihewa of O‘ahu, and Manokalanipo of Kaua‘i.” (‘Imiloa 2024).

Me ka ‘upena mai a kāua.

As well as our net.

E Ma‘akuakeke,

Say, Ma‘akuakeke,

Ka hoe nakeke,

The rattling paddles,

Ke kuapo‘i nakeke,

The rattling top covering,

Ke nakeke, e ala ua ao.

The rattling bailing cup, wake up, it is daylight.

Ma‘akuakeke answered Kawelo in his own chant and they joined in a canoe and fished for *uhu* (parrot fish [*Scarus perspicillatus*]). There was a very huge *uhu* called Uhumāka‘ika‘i (the traveling *uhu*) that frequented Ka‘ena Point. Many *lawai‘a* feared this *uhu* with sacred power, and “talked of it in whispers.” Kawelo learned the skills of catching *uhu* and proper *pule* (prayer) and *oli* in preparation to catch Uhumāka‘ika‘i. Kawelo and Ma‘akuakeke continued fishing. With the great strength of Kawelo, the two reached Wai‘anae in several strokes and fished outside of Ka‘ena. With fear Ma‘akuakeke later understood the plan Kawelo had to fish for Uhumāka‘ika‘i. It was on the second day of fishing when they encountered Uhumāka‘ika‘i who came in their presence accompanied by a nasty storm. With lots of *pule* and skill from the two men they slayed the fish which all men feared. As the two men paddled towards O‘ahu, Kawelo saw a red glow in the sky which was unseen to Ma‘akuakeke. This *hō‘ailona* or sign filled his heart with great *aloha* (love, affection) for his parents, and he knew they were in danger of ‘Aikanaka. Upon landing their canoe, Kawelo’s fears were confirmed by several men who said two messengers came from Kaua‘i whom his brothers sent to find Kawelo. His only stop was once in Wai‘anae to offer the slain *uhu* at a *heiau* in honor of his deity before returning to Waikīkī. Kawelo was greeted by Kamālama and men with spears who hurled them at Kawelo—this was a natural greeting. The uncle of the two boys observed their skill at spear throwing and dodging and said they would need those skills to contend with ‘Ainakanaka who had attacked his parents and driven them out of their homes. The parents were sheltered at the top of Hā‘upu Hill. The uncle recommended they pay aid to the parents before it was too late. He requested his wife to collect weapons from her father and directed Kamālama to ask for canoes from Kakuhihewa. His wife brought a *pīkoi* (a tripping club with a rope attached), and his father-in-law gave spears and war clubs. Kakuhihewa sent double canoes and a band of *koa* or warriors. Before leaving O‘ahu, Kawelo made offerings to the family deity, Kāne-of-the-day-break, and he said a *pule* for success. Kawelo was excited and knew he would succeed in conquering Kaua‘i when he saw “the yellow feathers of the god stood straight up along his crest like those of a fighting cock.”

The canoes headed straight to Wailua, Kaua‘i, upon Kawelo’s command. They arrived at night, and he told the warriors to rest while his wife, son, and brother kept watch for the enemies. The three who kept watch were greeted at daylight by many people who curiously examined the canoes. Word got to ‘Aikanaka who sent a few warriors not knowing Kawelo was on board the canoe, and they were smitten. Kawelo with his warriors and *‘ohana* ate and waited with knowledge that more warriors were to arrive. His wife continued to keep watch and asked Kawelo about the dust she was seeing coming towards them. Kawelo commanded his men to leap from the canoes and attack their enemies. Kāmālama and Ka‘ele (a boy adopted in Waikīkī by Kawelo) led the battle. The two fought victoriously through the processions of ‘Aikanaka’s warriors. At Nounou, Kauahoa was there, and to Kawelo’s astonishment was a gigantic man. Kawelo chanted to Kauahoa:

‘O Hanalei ‘āina ua,

Hanalei, the land of rain,

‘Āina anuanu, āina ko‘eko‘e,

The cold land, the wet land,

‘Āina a ka pe‘a i noho ai.

The land where the end is.

Noho ana e liu ana e,

Sitting there, delaying there,

Ma'ewa ana ka ukiuki o Honokoa.	For the anger of Honokoa is reviling.
I ka pali o Kalehuawehe	At the cliff of Kalehuawehe
Pua ka lama me ka wiliwili,	Where the lama and wiliwili bloom,
O ka ua lele ma waho o Mamalahoa.	Where the rain sweeps on the outside of Māmalahoa.
O Kauahoa o ka me'e o Hanalei,	Kauahoa, the stalwart youth of Hanalei,
O ke kanaka a Kamalama I hopo ai o Kauahoa,	The person of who Kamālama is afraid, Kauahoa,
He mea e ka nui—e—a!	For he is indeed large!
Eia ka ho'i ua kanaka nui	He is the largest man
O Kaua'i, o Kauahoa.	Of Kaua'i, Kauahoa.

Although Kawelo did not want to fight Kauahoa, Kauahoa was ready for battle, and ridiculed Kawelo. Kawelo called on his wife to bring her *pīkoi*. Kauahoa struck with his tree club while Kawelo leapt aside, and his wife hurled her *pīkoi*. The *pīkoi* tangled in the branches of the tree club, and while freeing his club, Kawelo struck Kauahoa with his war club called Ku'ika'a, and Kauahoa was dead. With the death of Kauahoa, the last and greatest of 'Aikanana's warriors, Kawelo thought, maybe 'Aikanaka would make peace and be by his side, and Kawelo would become ruler. After the victory of Kawelo, he became ruler. 'Aikanaka continued his residence at Koula in the uplands of Hanapēpē where he lived in poverty. There was another battle between 'Aikanaka and Kawelo with many events and hardships, but in the end Kawelo prevailed and this time slaughtered all his enemies becoming the undisputed *ali'i nui* of Kaua'i. Kawelo went to Hanamā'ulu where he lived with his parents and his wife. He cared for his parents, earning him the name Kaweloleimakua, Kawelo-the beloved-of-his parents.

A contribution to the story of Kawelo is in the following *oli kaua* or war chant composed in 1860 by Kala Wāwae'iole who was born in Anahola and lived in Kapa'a. It is called, *E Ala e Kauahoa, e ka Me'e U'i o Hanalei* (Pūku'i 1995:86–87).

E ala e Kauahoa, e ka me'e u'i o Hanalei,	Awaken, O Kauahoa, handsome hero of Hanalei,
'Uhū ea kau a moe I ke awakea,	Arise from your sleep so late in the day.
Ka pai ke kaua e ka hoahānau,	This is a challenge to battle, O cousin.
'O 'oe kā ia o ku'u hoa holoholo o ko wā kamali'i,	You are indeed my childhood playmate.
Hoa kui lei o Waikaea.	The one who strung lei with me at Waikaea,
E'e a kāua e kui lei ai,	The woodland where we strung them together,
I lei lehua noua kaikua'ana haku o kāua no 'Aikanaka.	To be worn by our older cousin and lord, 'Aikanaka.
E Kanekiaoha o kō pīkoi ho'olei 'ia i luna,	O Kaneikiaoha throw your pīkoi upward,
E hele lua I kaupaku o Hanalei.	Let it ascend to the rooftops of Hanalei.

E ala Hanalei.

Arise, O Hanalei.

### HANO HANO O HANA LEI: GLORY OF HANA LEI, COMPOSED BY ALFRED ALOHIKEA

Alfred Unauna Alohikea, who was born on September 10, 1884, and died September 15, 1936 (at the age of 52) was an honorable high chief who served for two terms in the House of Representatives in Kaua‘i for District 6. He was born in Waipio Valley (Hawai‘i Island), lived in Hanalei (Kaua‘i Island), and passed in Honolulu (O‘ahu Island). Alohikea was loved by the people of Hawai‘i. He is popular for writing many beautiful *mele*; one in particular, Hanohano Hanalei was his most famous. It was written in honor of Hanalei Valley (Elbert and Mahoe 1970:41).

Hanohano Hanalei I ka ua nui,	The glory of Hanalei is its heavy rains,
E pakika kahi limu o Manu‘akepa.	Slippery seaweed of Manu‘akepa
I laila ho‘i au I ‘ike iho ai	There I felt
I ka hana hu‘i konikoni I ka ‘ili.	Tingling cool sensation of the skin.
Aloha kahi one o pua rose	Greetings, O sand and rose flowers
I ka ho‘opē ‘ia e ka hunakai.	Drenched by sea spray.
‘Akahi ho‘i au a ‘ike I ka nani.	Never have I seen such splendor.
Hanohano Hanalei I ka ua nui.	The glory of Hanalei is its heavy rain.
Kilakila kahi wain ā Molokama	Majestic streams of Molokama
I ke kau ‘ia mai ho‘i e ka ‘ohu.	Mist-covered.
He ‘ohu ho‘i ‘oe nō ka ‘āina	You are the mist of the land
A Hanalei a‘e ha‘aheo nei.	That Hanalei cherishes.
Kilohi I ka nani Māmalahoa	Behold the beauty of Māmalahoa
I ka ho‘opē ‘ia e ke kēhau.	Drenched by the dew.
‘Elua wale iho nō māua,	She and I are two,
I kolu I ka hone a ka ‘ehu kai.	Three with the rustle of sea spray.

### ‘ULA NO WEO: BRIGHT RED GLOW, COMPOSER UNKNOWN

‘Ula No Weo is an ancient traditional *mele* accompanying a *hula*, and the composer is unknown. ‘Ula No Weo has been sung and chanted by many. The *mele hula* is performed with or without an ‘*ulī‘ulī* or gourd rattle. “This chant honors Kamoha‘i, a Kaua‘i chief, and praises the natural beauty of Hanalei Valley. Nohili is the point in the dunes at Barking Sands Beach” (Huapala.org 2024).

‘Ula no wo la la e ka lae la	The bright red glow of the sun
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Ka pua ‘ilima la.	Opens the ‘ilima blossom (Shining on the ‘ilima blossoms).
A ka lae a‘o Nohili la	At the point of Nohili
Ka huwai lana la o ka ‘awapuhi la.	The stream overflows among the ginger (Water flows among the ginger).
O ke ‘oe kani akua ia la	The sounding sand
A‘o Nohili la e ‘uhene nei la.	Of Nohili is delighted.
Ua lipolipo wale oe la	The deep dense underbrush
A‘o ka nahele la a‘o Ho‘ohie la.	Of the Forest of Ho‘ohie.
Ua ‘ike wale ‘oe la	You have seen
I ka ua loku la a‘o Hanalei la.	The heavy rain of Hanalei.
Haina mai ka puana la	Tell the refrain
La he inoa la no Kamoha‘i la.	In honor of Kamoha‘i.

### **‘ŌLELO NO‘EAU**

*‘Ōlelo no‘eau*, or proverbial/traditional sayings, usually have several layers of meaning. They reflected the wisdom, observations, poetry, and humor of ancient Hawai‘i, and often referenced real people, events, or places. Many *‘ōlelo no‘eau* were compiled by Pukui between 1910 and 1960 with both translations and explanations of their meanings (Williamson et al. in Pukui 1983:vii), and often contain more *kaona* (hidden, as in poetry) than obvious at first glance. Several *‘ōlelo no‘eau* related to places near the study area are presented below.

#### **Hanalei**

*Haehae ka manu, ke ‘ale nei ka wai* (tear up the birds, the water is surging). The meaning is there is no time for pleasantries. The short *mo‘olelo* behind this proverb is about a *kanaka* named Kane‘alohi and his son who both lived near the lake of Halulu at Wai‘ale‘ale, Kaua‘i, and were bird catchers of *‘uwa‘u* (petrel). They were falsely accused of poaching on land belonging to the chief of Hanalei, who sent a squadron of warriors to kill them. The son recognized the movement in the water of Halulu and called out to his father, who tore the birds to hasten cooking (Pukui 1983:112 #404).

*Ka limu kā kanaka o Manu‘akepa* (the man-throwing algae of Manu‘akepa) (Pukui 1983:340 #1442). Hanalei has always been known for its pouring rain. A slippery algae once grew among the grasses on the beach and if stepped on, could cause one to slip and fall. The algae Manu‘akepa is popular in songs and chants.

*Ki‘eki‘e Kaupoku-o-Hanalei* (high up is Kaupoku-o-Hanalei). It refers to a person who is haughty, conceited, or willful. Kaupoku-o-Hanalei is a ridge behind Hanalei Valley (Pukui 1983:423 #1787).

*Lu‘ulu‘u-Hanalei I ka ua nui; kaumaha I ka noe o Alaka‘i* (heavily weighed is Hanalei in the pouring rain; laden down by the mist of Alaka‘i). An expression to relay the burden of sadness, weighted grief, and tears of pouring rain in dirges and chants of woe. Names of rains and fogs of other places may also be used (Pukui 1983:483 #2034).

*Me‘e u‘i o Hanalei* (the handsome hero of Hanalei). Referring to one who is attractive (Pukui 1983:423 #1787).

## LAND USE

The *mokupuni* of Kaua‘i was described affectionately as “*Kaua‘i nui moku lehua pane‘e lua I ke kai*” (Great Kaua‘i of the *lehua* groves which seem to move two-by-two to the shore).<sup>6</sup> The *mokupuni* was divided into six *moku* and political components with *kuleana* (responsibility, right, privilege) assigned to several *ali‘i*—sometimes solitarily and at other times in union with other *moku* (Maly and Maly 2003:5). In the *moku* of Halele‘a as previously mentioned, agriculture has been the dominating form of land use in Hanalei from the past to the present as documented in archaeological records and the documents of the Māhele of 1848 (see Table 1).

## PRE-CONTACT AND EARLY CONTACT LAND USE

Archaeological studies suggest the initial settlement period of Hanalei Valley to be around the sixth or seventh century AD (Carson 2005; Hammatt and Borthwick 1986; Schilt 1980; Walden et al. 2014). Before traveling to the islands, the voyagers brought with them their beliefs and they also packed their canoes with flora such as *kalo*, *‘uala* (sweet potato), and *‘ulu* (breadfruit), and fauna such as *moa* (chicken), *‘ilio* (dog), and *pua‘a* (pig). Like in most places in the Hawaiian Islands, they first inhabited areas along the vegetated coast then they flared out to the deeper valleys. With *kuleana*, *Ka po‘e kahiko* managed their resources prudently, utilizing proficient irrigation techniques to redirect *wai* to and from the *muliwai* or rivers where they fished, planted, and harvested in certain seasons. The Wai‘oli and Hanalei Rivers were instrumental to the streaming of farmed alluvial flood plains to the nourishment of Hanalei Bay. The *muliwai* were a huge contributing factor to the area’s productive agriculture, and rich aquatic and marine life. There is some speculation Hanalei Valley produced a high volume of food for the island of Kaua‘i.

Before Western contact, all the *‘āina* of Hawai‘i and natural resources extending from *mauka* to *makai* included the mountain tops to the depths of the ocean were held in “trust” by the high chiefs. The right to lands, fisheries, and to the *hoa‘āina* or native tenants were at the liberty of the chiefs and their representatives (*konohiki* and/or *haku āina*). Living and abiding by the strict guidelines based on ceremonial and ritual practices, *po‘e o ka ‘āina* (people of the land) were able to collect all natural resources. They managed to *lawai‘a* for several different marine and freshwater fish, *‘ohina* (gather) of both marine and freshwater shellfish, *‘ohina limu* (gather limu), *mahi‘ai lo‘i kalo* (farm taro pondfield) and *māla* (cultivated field; garden) for the sustenance of themselves and their *‘ohana*, and pay tribute to the *ali‘i* and *kahuna* who governed them (Maly and Maly 2003:5). Everything they harvested was used for everyday life such as food, shelter, medicine, and clothing.

Developing and maintaining such a highly productive economy for food, shelter, medicine, and clothing, including the building of *heiau*, required a large population. Hawai‘i was once a food and supply producing mecca and hub attracting many foreigners on their journeys across the Pacific Ocean. When Captain James Cook landed on Kaua‘i, members of his crew had venereal diseases *ma‘i hilo* (gonorrhea) and

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<sup>6</sup> Kihe and Wise in *Ka hoku o Hawai‘i 1914–1917* (Maly translator).

*kaokao* (syphilis), and probably tuberculosis. Grog, a type of alcohol, was first served to people of Kauaʻi (Blaisdell 1998). Hawaiʻi, once a disease-free paradise, was being hit by waves of different maladies. In 1804, *maʻi kukule* or cholera killed 15,000 and resulted in the prevention of Kamehameha’s second attempt to conquer Kauaʻi. In 1818, 60 lives were lost to catarrh and fevers. Kamehameha I, at the age of 69, died of a possible stroke in 1819 at Kamakahonu, Kailua, Kona. Neither Spaniard Francisco De Paula Marin, his physician, nor the medical *kahuna* could save him. In 1823, High chiefess Keʻōpūolani, widow of Kamehameha I, with chest abscess died at the age of 45 at Kaluaokiha, Lahaina. In 1824, Kamehameha II, Liholiho, at age 27 and Queen Kamāmalu, age 24 died of *ʻulāliʻi* (measles) in London. In the same year, the ruling chief of Kauaʻi, Kaumualiʻi, in his forties died, and it is unknown if he was poisoned. By 1824 to 1826 there were thousands who died of cough epidemics. On May 3, 1826, George Humehume, son of King Kaumualiʻi, died from influenza (Warne 2008:207). Many more people experienced loss of life thereafter.

Scholars have tried to estimate the population in Hawaiʻi for the year 1778—estimates included the counting of houses and household size averages in villages visited by Europeans, and the data was extrapolated to all Hawaiʻi. Estimates of population size were also calculated by multiplying averages of the land area of Hawaiʻi by presumed levels of population density. The most interesting method used to acquire a population estimate was a variation of multiplying estimates of cultivated land at the time of first contact by assumed levels of population supported by the cultivated areas (Swanson 2019: 205–206; Cordy 2007; Hommon 2008, 2013; Kirch and Rallu 2007; Rallu 2007; Schmitt 1968, 1970a Stannard 1989). The results of Swanson’s (2019) estimated population for Ka Pae ʻĀina o Hawaiʻi in 1778 is 683,200 people. Then the population rates declined because of newly introduced diseases and related factors that affected the Native Hawaiian population from the time of first contact to 1900: in 1780, a decline of 5.7%, 644,383; by 1800 a decline of 47.5%, 359,010; by 1820 a decline of 70.7%, 200,018; by 1840, 83.8%, 110,948; and by 1900 the population was at 29,799 (Swanson 2019:208–209; Cordy 2007; Kirch and Rallu 2007; Rallu 2007; Schmitt 1970a, 1970b; Schmitt and Nordyke 2001). Deaths from disease were unbiased to *kanaka*; both *aliʻi nui* and *makaʻāinana* faced death. The declining of the population and sickness gives an idea of the necessary abandonment to *mālama* many *loʻi kalo*, *māla*, *loko iʻa*, and *heiau* in Ka Pae ʻĀina o Hawaiʻi, but also the populations in specific areas such as Hanalei.

An article from the Hawaiian Newspaper Ke Kumu Hawaiʻi (October 14, 1835, Vol I, No. 21, Page 164) regarding a census of births and deaths in Ka Pae ʻĀina O Hawaiʻi was conducted in September of 1834 to September of 1835. From Hawaiʻi to Niʻihau, there were 6,838 deaths and 3,335 births; therefore, the population was decreased by 3,503 people. The article included a table of a census of the population (including births and deaths) conducted in September of 1834 to September of 1835 on the north side of Kauaʻi in the individual *ahupuaʻa* and *moku* of Puna, Koʻolau, Haleleʻa, and Nā Pali.

# HE PAPA O NA KANAKA MA KAUAI.

		Kanaka Makua.	Kamalii.	Pau.	Ka poe i make i ka makahiki hookahi.	Na keiki i hanaia 'i i ka makahiki hookahi.
Puna.	Kealie,	265	10	283	16	5
	Homaikawaa,	60	10	70		
	Anehola,	234	49	323	14	6
	Papaa,	37	8	45	2	1
Ko'olau.	Maloaa,	102	13	115	13	2
	Lepouli,	70	15	85	12	4
	Waipake,	66	12	78	7	1
	Pilaa,	104	22	126	13	
	Waiakeleua,	85	16	101	7	1
	Kuhili,	80	11	91	6	2
	Kilauea,	88	29	117	4	2
Halele'a.	Kalihiwai,	156	34	190	8	2
	Kalihikai,	84	15	99	4	1
	Hanalei,	376	146	522	22	27
	Hawoh,	60	23	83	9	3
	Betelebema,	60	15	75		
	Waipa,	73	12	85	2	3
	Lumahai,	90	29	119	15	4
	Wainiha,	153	63	216	8	8
	Haena,	100	16	116	4	1
	Hanaka,	38	10	48	2	1
Pali.	Kalaleu,	115	16	131	6	6
Pau loa.		2536	582	3118	164	80
O ka poe make i ka makahiki hookahi,		164				
Na keiki i hanaia mai ia wa,		80				

Figure 5. Table of the People on Kaua'i (Ke Kumu Hawai'i 1835, Vol I, No. 21).

In reference to the table in Figure 4, the column to the far left is the names of the *moku* where the census was conducted. The next column is the *ahupua'a* in which the people lived in the *moku*. The third column represents the number of people including parents. The fourth column depicts the number of children. The fifth column is the sum of both the adults, parents, and children. The sixth column represents the number of people who died in the same year. The last or seventh column depicts the number of children born in the same year. The "Pau loa" row is the totals. There was a total of 3,118 people (adults, parents, and children) counted in the census conducted in September of 1834 to September of 1835 for north Kaua'i (Puna, Ko'olau, Halele'a and Nā Pali). There were 164 people who died, and 80 children born, reducing the population of north Kaua'i to 84 people. In Hanalei, there was a hardy population of people, the highest in north Kaua'i and even higher than parts on O'ahu at that time. Hanalei had a total of 522 people (adults, parents, and children), 22 deaths, and 27 births, thus increasing the population by five babies. The mortality rate of Hanalei is unique in most of Ka Pae 'Āina O Hawai'i in September of 1834 to September of 1835 because there are five more new lives than deaths.

The native inhabitants of the isolated Ka Pae 'Āina o Hawai'i overwhelmed by the influx of disease, the introduction of new technologies and new ideas: new cloth was more durable than the *kapa* (traditional

clothing and bedclothing made from *wauke* and *māmaki*); guns were more efficient for killing in war than their wooden weapons; the shift to a currency-based economy they did not understand and required transformative adjustment from a simple bartering system; and the privatization of land ownership from a feudal system in which land was no longer communally managed but could be bought, sold, and leased. For the mind of the Hawaiian strongly believed “*He ali‘i ka ‘āina; he kauwā ke kanaka* (The land is a chief; man is its servant). Land has no need for man, but man needs the land and works it for a livelihood” (Pūku‘i 1983:137, #531; Wichman 2003:88).

## THE MAHELE ‘ĀINA OF 1848

By the mid-1840s, the land tenure system of Hawai‘i was drastically being altered, which sequentially led to the Hawaiian system of land and fishery rights to be defined and codified. The laws set the foundation for executing the Māhele ‘Āina of 1848,<sup>7</sup> allowing fee simple ownership rights to the *hoa‘āina* (native tenants).

The Mō‘ī, Kamehameha III (Kauikeaouli) distributed lands across Ka Pae ‘Āina o Hawai‘i to the *ali‘i* class as recorded in the Mahele Book of 1848, and two years prior, the Land Commission had begun receiving claims from the *maka‘āinana* or common people. The *ali‘i* who received ‘*āina* paid a commutation fee of one-third the value of his or her ‘*āina*, satisfying the government’s interest in all the ‘*āina*. The *maka‘āinana* was not required to pay a commutation fee (except for house lots in Honolulu, Lāhainā and Hilo), but were required to pay for the survey of their *kuleana* claims (Kame‘eleihiwa 1992:211, 295). In the *moku* of Halele‘a (as listed in the Mahele Book 1848) the *ahupua‘a* were distributed to the following *ali‘i* from northeast to northwest: Kalihiwai (the Mahele Book list as an *ahupua‘a* in the *moku* of Ko‘olau) to Lunalilo on January 28, 1848; Kalihikai to Aaron Keali‘iahonui on February 9, 1848; Hanalei to Kamehameha III (Crown Lands) on February 1, 1848; Wai‘oli to Kamehameha III (Crown Lands) on January 28, 1848; Waipā to Ruta Ke‘elikōlani on January 28, 1848; Waikoko to Mikahela Kekau‘ōnohi on January 28, 1848; Lumaha‘i to Laura Konia on January 18, 1848; Wainiha to Mikahela Kekau‘ōnohi on January 28, 1848; and Hā‘ena to Abner Pākī on February 11, 1848 (Kamehameha III 1848: 16, 22, 25, 55, 132, 154).

Land grants were ‘*āina* the King granted to the kingdom (Government) and sold and deeded by the government to people who applied for them, generating revenue to support government functions. Some of those ‘*āina* were sold as Royal Patent Grants to individuals who were usually long-time residents of the lands they bought. In the Halele‘a *moku*, the *ahupua‘a* of Wai‘oli and Hanalei were a part of that land inventory—Wai‘oli 41 parcels and Hanalei four parcels (Maly and Maly 2003:17).

Records from the Māhele give insight into how the lands were used, such as the continuity of fisheries that existed before Western influence still being active and maintained by landowners in 1848. Hanalei had several fishponds included in the land documents, the most popular and still existing today being the Ponds of Kānoa. There were *lo‘i kalo* and house lots mentioned along the Kānoa Ponds. The following information was gleaned from Maly and Maly (2003) and OHA Kipuka (2024):

Land Commission Award (LCA), Helu (Number) 597 was owned by Thomas Charles Hyde (T. C. B.) Rooke (he was the father to Queen Emma Rooke who was married to Kamehameha IV, Alexander Liholiho). T. C. B. sold a portion of Helu 597 to J. Deadman; the land is described as running along a ridge and descending by some coconut trees at the Kānoa Fishpond. Helu 2260 and 10313 for Namau‘u describe a parcel of land with *lo‘i kalo* bordering Kānoa Fishpond. Helu 3664 for Mahuahua was a house lot along Kānoa Fishpond. Helu 4076:2, owned by Kamakaiwa, was another house lot on the Kānoa Fishpond

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<sup>7</sup> This was the legal process, initiated in 1845, that turned Hawai‘i’s traditional land system into a system of European-style fee-simple ownership.

boundary. Helu 4109:2 or 9139 was owned by Kaunahi and was another house lot bordering Kānoa Fishpond. Helu 10955 was land held by Wahineiki with cultivated *lo 'i kalo* at the boundaries of Kānoa Fishpond (Maly and Maly 2003:17).

Agriculture has always been prominent in the Hanalei landscape, especially the *lo 'i kalo* as shown in Table 1. Robert Crichton (R. C.) Wyllie, Albert Spencer (A. S.) Wilcox, and Charles Titcomb (see Figure 6) acquired large tracts of lands for crop cultivation for coffee, sugarcane, mulberry to feed silkworms, and fruits.

#### **19TH TO 20TH CENTURY LAND USE: PLANTATION AGRICULTURE, PRINCEVILLE DEVELOPMENT, SAVING THE HAWAIIAN POPULATION, EXPORT OF RICE, AND HANALEI PIER**

Death was consuming the manpower required to maintain the *'āina*, and the *mō 'ī* were deeding large tracts of *'āina*, possibly to improve the health and welfare of the *'āina*. Most of the *'āina* was used for agriculture and immigrants were arriving to Hawai'i by the thousands to maintain plantations. Ladd and Company were the first to set up a permanent sugar plantation in 1835 in Kōloa on Kaua'i. The sugar industry brought about the change of free labor and the feudal land system of old was slowly diminished. An article in the *Polynesian*, June 1941, also states, "Even the King, satisfied that free labor is the most profitable, has of late abolished the working days, and pays his workmen, who labor under the superintendence of a white man, regular wages, a change which we hope will be introduced throughout the group" (Kuykendall 1938:182).

#### **Robert Crichton Wyllie**

Robert Crichton Wyllie was born in Hazelbank, Scotland in 1798. He was the Minister of Foreign Affairs for the Hawaiian Kingdom from 1845 to 1865. While in Honolulu, Wyllie lived on his estate, which was called Rosebank. He dreamed and aspired to live a finer life, in the manner of a Scottish lord after he retired from government service. He was the founder of the *kūlanakauhale* (town) Princeville. Captain Godfrey Rhodes held a 750-acre lease of Crown Land in Hanalei Valley with a coffee plantation, and for \$1,300.00, Wyllie acquired the lease in 1853. He appointed Godfrey Frederick Wundenberg as his plantation manager. After two years, Rhodes sold Wyllie his business interests in the coffee plantation for \$8,000.00. Wyllie was visited at his estate by King Kamehameha IV (Alexander Liholiho), Queen Emma, and their two-year-old son, Prince Albert, in 1860. The royal family stayed at Hanalei for two to three weeks. At Wyllie's estate was Charles Titcomb, whose house was located alongside the road to Hanalei town, approximately one mile downstream of the present Hanalei Bridge. Wyllie was not present for the Royal visit as business detained him in Honolulu. The family was hosted by Mr. and Mrs. Wundenberg who lived in Wyllie's plantation house at Kikiula or the original name, Pu'u Pehu (see Figure 7). Built out of stone by Captain Rhodes around the 1840s, Kikiula was situated on the bluff above the present Hanalei Bridge allowing for a spectacular view of Hanalei's valley, plain, river, and mountains. At the time there was no bridge crossing the river, therefore, travel to Kikiula from Hanalei was by boat or ferry traveling upriver to a landing that was located at the present bridge and travel up to the bluff was done by walking or riding on horseback. Titcomb honored Queen Emma by naming his place Emmasville in 1860, and that same year Wyllie named his plantation Princeville in honor of Prince Albert. Only four years old, Prince Albert died in 1862 leaving his parents heartbroken with grief. Wyllie had a schooner he traveled on for trips from Hanalei to Honolulu. On the schooner he had painted the coat-of arms insignia on its stern, and it was re-christened *Prince of Hawai'i*. He even suggested the title Baron De Princeville for Prince Albert (Soboleski 2006). After his death in 1865, Wyllie was entombed on the grounds of the Royal Mausoleum in Nu'uuanu, O'ahu.

## **Charles Naoiokalaniula Titcomb**

Charles Titcomb (1805–1883) was a “former Yankee watchmaker” who arrived in Hawai‘i in 1830 aboard a whaling ship called the *Lyra* that shipwrecked off Maui. He settled on Kaua‘i and married *ali‘i* Kanikele Kamalenui (1827–1881), and together they had three sons and five daughters. In 1836, at Kōloa, Charles Titcomb and Sherman Peck raised thousands of mulberry trees to feed the silkworms on their silk plantation. The mulberry trees were destroyed by high winds, and Titcomb took a personal loss of \$15,000.00. On July 23, 1839, Kamehameha III (King Kūikeyaouli) and Kuhina Nui Kekāuluohi signed a 25-year lease for 84 acres (0.34 km sq.) for \$50.00 annually to Charles Titcomb in Hanalei (Soboleski 2023; Ulukau Electronic Library 2024). In the mid-1800s Charles Titcomb purchased large tracts of land from the Kingdom of Hawai‘i, and lands were deeded by, Alexander Liholiho, Kamehameha IV (OHA Kipuka 2024) (see Figure 5). He tried silk cultivation at Hanalei but it proved to be too wet. Luckily, he had his coffee plantation in Hanalei where he concentrated his efforts (Kuykendall 1938:183). In 1847, conditions of the Hanalei coffee plantations were reported flourishing according to a *Polynesian*, September 4, 1847, article but in the same year rains of Hanalei damaged his coffee trees, and labor shortages due to an epidemic and the California gold rush put a damper on coffee cultivation. Titcomb decided to raise sugarcane in Hanalei, but the climate was too wet (Kuykendall 1938:316; Soboleski 2023). There were several thousand acres of land transferred to Charles Titcomb in Hanalei, Kalihiwai, and Kīlauea (OHA Kipuka 2004). In 1863, Titcomb sold 750 acres (3.08 km sq.) of those sugar cultivated lands to R. C. Wiley and went to one of his other deeded land grants in Kīlauea to raise cattle, 3,016 acres (12.21 km sq.) of land (Grant 2896) which he acquired on January 27th of the same year (Soboleski 2023; OHA Kipuka 2004). He sold the cattle ranch to E. P. Adams and John Ross in 1877 who founded Kīlauea Sugar Company (Soboleski 2023).

## **Emma Kauikeōlani Napoleon Mahelona Wilcox and Albert Spencer Wilcox**

Emma Kauikeōlani Napoleon Mahelona Wilcox’s (1851–1931) parents were Pamahoa Nako‘olani Maihui (1830–1894) and Temanihi Napoleon (1834–1879). Her great-grandmother Emma was married to Samuel Mahelona (1861–1892) at Kawaiha‘o Church on June 22, 1882. Samuel Mahelona was an attorney at a prestigious firm, Allen and Robinson. Samuel’s father was a judge and politician. They had four children but lost one, Sunbeam Cushman Nehenuiokalani Mahelona (April 14, 1888–August 16, 1889), and the other children were Samuel Hooker Kaleo‘okalani Mahelona (1884–October 20, 1912), Ethel Kulamanu Mahelona (February 2, 1887–September 19, 1954), and Allen Clesson Kauluheimalama Mahelona (1891–unknown). Emma was the headmistress at Kawaiha‘o Seminary, a prominent Christian school. After being married for 10 blissful years together, Samuel Mahelona suddenly died at the age of 31. At the time Emma had lost four siblings, a child, and a husband by age 41. After Samuel’s death, Emma faced hardships; she was required to post a \$600 bond to ensure her ability to care for her own children and handle her late husband’s affairs. Although it took some time and perseverance, Emma was given guardianship of her children and was granted executor of her husband’s estate (Young 2024a; Kaua‘i Historical Society 2012:7–13; Family Search 2024).

Emma continued to work at Kawaiha‘o Seminary to provide her livelihood and to support her family. Kauī Wilcox, a student at Kawaiha‘o Seminary took an admirable liking to Emma. While on vacation back at her home on Kaua‘i, Kauī relayed her admiration for Emma to her father, Albert Wilcox (1844–1919), a sugar planter who was born in Hilo and raised at Wai‘oli in Hanalei, Kaua‘i. After Albert and Emma met, they were married on June 7, 1898, a month after the Annexation of Hawai‘i and five years after the illegal overthrow. Albert was the fourth son of eight to parents Abner and Lucy Hart Wilcox who were teachers from Connecticut and joined the eighth company of American Protestant missionaries who in 1837 arrived in Hawai‘i. As a youngster, he was privately tutored at home and later went to Punahou where he graduated (Young 2024a; Kaua‘i Historical Society 2012:7–13).



At the age of 19, Albert and his brother, George Norton Wilcox 1839–1933), had an early sugarcane planting venture at Hanalei, Kaua‘i, where their parents were stationed missionaries. He and his brother thrived at Hanamāulu plantation, where he became manager, and started an independent sugar plantation at Waipā which was discontinued within a few years. He found rice and taro more conducive to the wet Hanalei weather. Albert became a contracting planter for the Princeville plantation, and from 1877 to 1889 he raised sugar cane for the Hanamāulu mill. Although it was hard work, he stayed with it and laid the foundation for his family. Albert and Emma later retired to an estate called Kilohana in Puhi (where they had a stock ranch), and then on to their beach home named Kauikeōlani in Hanalei. Keauikeōlani exists today and sits on a large, landscaped lawn of land on the *mauka* side of Weke Road by Kauikeōlani Loko and Kānoa Pond (Nellist 1925: 183; Kaua‘i Historical Society 2012:7–13; Young 2024a). Besides his Kaua‘i holdings, Albert had large business interests as president of the C. Brewer Estate, Ltd., and a director of the Inter-Island Steam Navigation Co., Kekaha Sugar Co., Līhu‘e Plantation Co., Wai‘anae Co., Home Insurance Co., of Honolulu, and the Selama-Dinding Plantations, Ltd. In Honolulu, he had extensive real estate holdings which included the Kauikeōlani (Hawaiian Trust Co.) building and the Lewers and Cooke building. Albert was a member of the House of Representatives of the Kingdom of Hawai‘i from 1891 to 1892 and a delegate to the constitutional convention of 1894. He was a member of the Pacific, Honolulu, and Oahu County clubs and the Honolulu Chamber of Commerce (Nellist 1925: 183).

Emma and Albert were some of Hawai‘i’s early philanthropists; in 1901 they supported the new Līhu‘e Church by providing all the interior furnishings. Emma was the Honorary President of the Kaua‘i branch of the Ka‘ahumanu Society; a member of the Daughters of Hawai‘i, an organization preserving Hawai‘i’s historic places and institutions; and a member of the Mokihana Club of Kaua‘i. Death was everywhere and she witnessed it within her family; thousands were dying from measles, leprosy chicken pox, and smallpox—foreign diseases introduced to the islands. Albert and Emma purchased land on Kuakini Street and built Kauikeōlani Children’s Hospital in 1909 in Honolulu. The hospital was one of only a few in the world that was dedicated to treating children at the time. Kauikeōlani Children’s Hospital merged with Kapi‘olani Hospital (founded by Queen Kapi‘olani) and relocated to become Kapi‘olani Medical Center for Women and Children in 1978. In 1917, as a memorial to his son Samuel Mahelona, who died at a young age from tuberculosis, Albert Wilcox and others from the Wilcox family provided lands and funds for the Samuel Mahelona Memorial Hospital at Kapa‘a, Kaua‘i, for the treatment of tuberculosis. It was one of the first hospitals on Kaua‘i island. Wilcox Hospital in Līhu‘e, Kaua‘i, was established November 1, 1938, by Albert’s brother George Wilcox and Dora Isenberg along with the Līhu‘e Plantation (which donated 17 acres [0.07 km sq.]), and ‘*ohana*’ (Kaua‘i Historical Society 2012:7–13). In 1950, Wilcox Hospital developed an X-ray program in Hawai‘i for early detection of tuberculosis. In 1968, Betty Bell, a pharmacist at Wilcox Hospital “introduced a contemporary unit dose system of distribution, improving the safer and more efficient delivery of patient medication” (Hawai‘i Pacific Health–Wilcox Health 2024). It was recognized nationally and used as a guide by other hospitals in Hawai‘i (Kaua‘i Historical Society 2012:7–13).

## Exportation of Rice

During the mid to late 1800s *kalo* cultivation declined after the *lo‘i kalo* were vacated by a declining Hawaiian population. Many *lo‘i kalo* were converted to *lo‘i laiki* or rice pond fields. Prior to 1850, a Dutchman named John DeVries (1826–1905) settled in Hawai‘i and lived at Hanalei. He started a rice plantation in Lumaha‘i Valley. In the 1850s, he was credited with bringing some of the first Chinese laborers to Hawai‘i. He is the great-grandfather of Aunty Emma Defries (1925–1980) who carried the traditional *kahuna mo‘okū‘auhau* from her second great-grandfather, Hewahewa (c.1174–1837), *kahuna nui* (high priest) to Kamehameha I. John De Vries’ wife, Aunty Emma’s great-grandmother, was Haleokeawe Kekoakalani (1925–1987), a descendant of Hewahewa (Soboleski 2024).

In 1971, Aunty Emma spoke of the Ghost Marchers of Hanalei. She said (Soboleski 2024):

Once, when the Chinese laborers were preparing the paddies for planting, they were frightened off by a group of people. The Chinese workers said they saw hundreds of men walking down from the mountains on a trail near the Hanalei River. The marchers were dressed in malo(s) [loin cloths] and short feathered capes and all of them carried spears. When the strangers approached the rice paddies, the workers thought they would be harmed and ran away. From a distant spot, they turned to look again at the men who carried the spears. They were amazed at what they saw. The warriors were walking through a stone wall that ran the length of the road. Afterwards, they disappeared in the Hanalei River.

More Chinese rice growers moved to Hanalei in 1882 and by 1892, 750 acres (3.04 km sq.) of land in Hanalei and Wai‘oli were filled with *lo‘i laiki*, the largest rice producing location in all Hawai‘i. Rice farmers discovered a commercially viable product in Honolulu and California as multitudes of Chinese immigrated to areas like Hanalei. The success of the rice and its export was the catalyst for constructing the Hanalei Pier. The Hanalei River is adjacent to the pier, and rice from the valley would arrive on the black barges. A freight storage was located at the foot of the pier and was connected by railroad tracks. From the landing up *mauka*, rice was shuttled to the end of the pier on a railroad cart and then loaded onto boats. What were called lighters or small whale boats carried rice to steamboats out in Hanalei Bay.

Rice was a major crop in the 1860s, the number two agricultural product in the Hawaiian Kingdom. Many Chinese farmers left the sugar cane plantations after the expiration of their five-year contracts. By 1898, Hawai‘i was the third in rice production in the United States following Louisiana and South Carolina. That same year, annexation allowed for the removal of all tariffs; it intensified the growth of the sugar industry, and it was a blow to rice production in Hawai‘i. Upon annexation, agricultural land costs were on the rise from \$10–\$20 per acre (0.0040 km squ.) to \$30–\$35 per acre; therefore, rice was not as profitable as sugar and rice lands were converted. There were exclusion policies for Chinese leading to the decreased market for rice. From 1898 to 1903, the Chinese population dropped by 6,000, a consequential factor in the declining Honolulu market. Also noteworthy, local rice was not purchased by the Japanese; instead they used rice imported from their homeland. Other issues for the declining rice industry included the required need for fertilizers due to exhaustion of the land, competition from California rice growers, and the introduction of a rice-borer insect (Young 2024b).

In the early 20th century, the local shipping centers were Port Allen, Nāwiliwili, and Hanalei. In 1926, Nāwiliwili Harbor became Kaua‘i’s primary shipping center in 1930 after large-scale development of the harbor started in 1926. By 1931, the Nāwiliwili expansion caused the increase of freight tonnage handled from 3,766 tons (3,416,458 kg) in 1929 to 56,439 tons (51,200,600 kg). The increase in tonnage was also due to the improved highway system, leading to a decreased use of smaller ports on the island. As a result, Hanalei Pier was abandoned in 1933, “marking the end of an era of inter-island transportation” (Young 2024b).

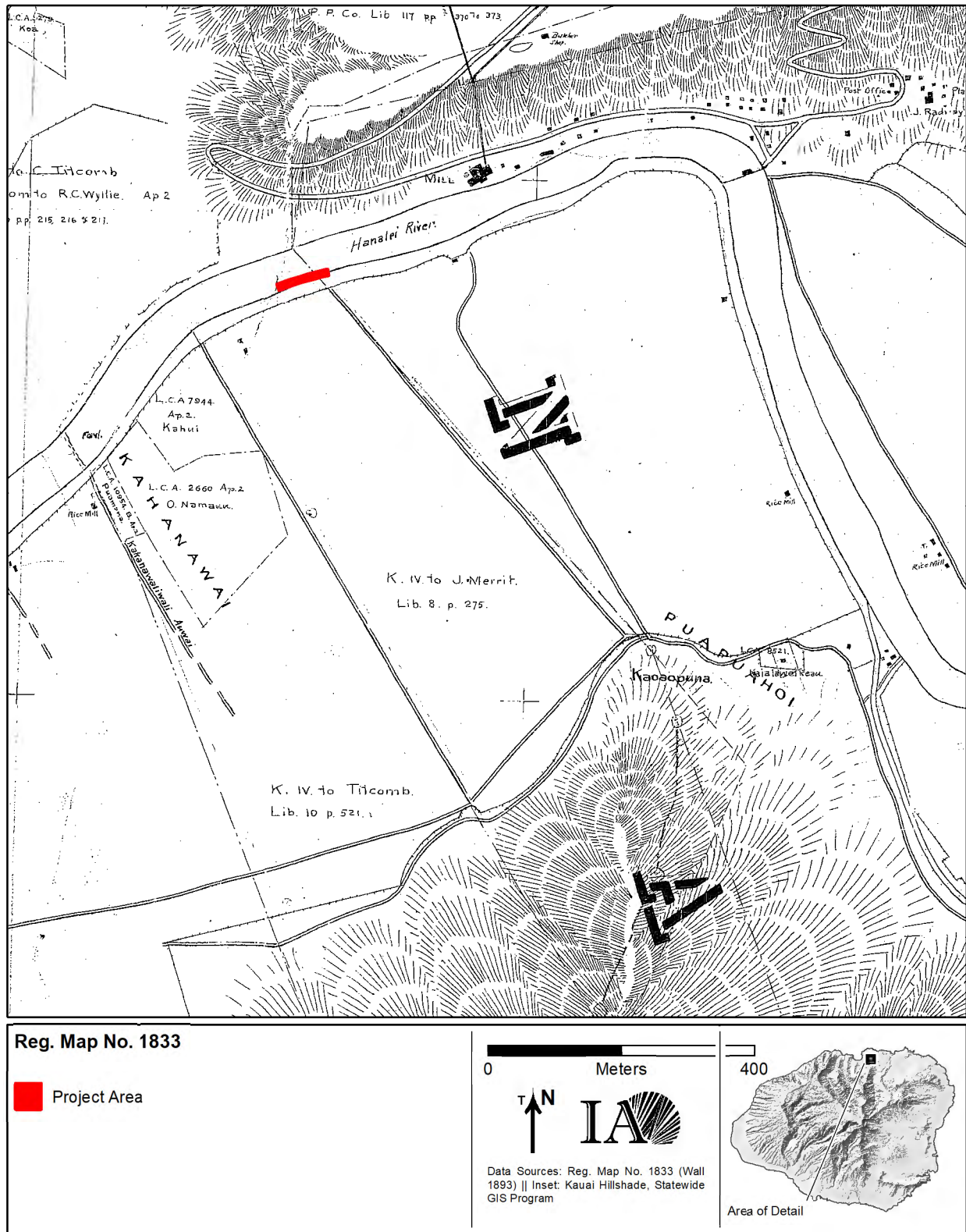


Figure 6. Project area on an 1893 map by W. A. Wall (RM 1833) (Wall 1893).



Figure 7. Project area on a 1903 map by W. A. Wall (Wall 1903).





### III. METHODS

The ethnographic resources for the study area discussed in this CIA were identified through reviews of traditional place names, archival and newspaper records, published oral histories, and cultural consultant interviews conducted specifically for this report.

#### PLACE NAMES

Native Hawaiians lived in a rich world of patterns and rituals of daily and seasonal life, traditions, and kinship overseen by gods and spirits in their many manifestations. Place names constitute one set of data that provides a sense of this non-material world and are therefore a valuable component of the cultural resources of the region. Place names can also be used to create ethno-geographic maps of the Kahului community which include physiographic landscape features, geopolitical units such as land sections, and the communities living within these land sections. Place names were found on the Ulukau Hawaiian Electronic Library: Hawaiian Place Names (<https://ulukau.org/hpn/?l=haw>) and Māhele Database (<https://ulukau.org/cgi-bin/vicki?l=haw>).

#### ARCHIVAL RESEARCH

Archival records can provide a detailed picture of land use and settlement. The primary data sources for identifying ethnographic resources for the study area are the 19th century Land Commission claims and testimonies, Boundary Commission testimonies, historical maps of the period, late 19th and early 20th century newspapers, census records, and obituaries.

Historical newspaper research was conducted for Hawaiian-language newspaper publications via the Office of Hawaiian Affairs (OHA) Papakilo Database website (<https://www.papakilodatabase.com/main/main.php>) and Ulukau Hawaiian Electronic Library website (<http://nupepa.org/gsd12.5/cgi-bin/nupepa?l=en>). The 1848 Mahele land documents were viewed on the Kipuka Database website, also an OHA resource (<https://kipukadatabase.com>). The Ulukau Hawaiian Electronic Library Database and other English-language newspapers as cited also contributed to the context of this CIA.

#### ORAL HISTORY INTERVIEWS

The primary source of ethnographic information for this CIA comes from long-form interviews with six long-time Kaua‘i *kama‘āina* conducted by Hannah Kaumakamanōkalanipō “Kaumaka” Anae, M.A., in 2024 (Table 2).

Six consultants were interviewed from July 11 and July 12, 2024. Three one-on-one interviews and a group interview with three members of the Sheehan ‘*ohana* were conducted. The interviews took place in the *ahupua‘a* of Hanalei: two at Princeville, and two at Hanalei Land Company.

Table 2. Biographical Summaries of the Six Consultants Interviewed for the CIA by Kaumaka Anae.

Consultant Name	Consultant Information	Date of Interview
Patrick Solomon Kamealoha Hanohano Pa-Smith	Born in 1965 at Vallejo, California, Kamealoha was raised on Kaua‘i where he graduated from Kapa‘a High School. His paternal third great-grandfather is Charles Titcomb (1805–1883) who married his great-grandmother Kanikele Kamalenui (1827–1881) in 1841. Kamealoha is the Program Director for Hanalei River Heritage Foundation. He is fluent in the Hawaiian language and is consistent with the practices of <i>mālama ‘āina</i> in Wailua and Hanalei and <i>kilo</i> of the fisheries in Hanalei.	July 11, 2024
Mitchell Ka‘anohealani ‘Ālapa	Born in 1954 at Hau‘ula, O‘ahu, Mitchell was raised on Kaua‘i since the age of two. Mitch is a descendant of Mō‘ī Kaumuali‘i and Ali‘i George Humehume, son of Kaumuali‘i. He grew up in the towns of Hā‘ena, Hanalei, Anahola, and went to St. Catherine’s Catholic School in Kapa‘a. He is a <i>mea hīmeni</i> , <i>mahi‘ai</i> , <i>lawai‘a</i> and retired <i>he‘e nalu</i> of big wave surfing. He and his wife Lynn started a business in Hanalei called Hawaiian Surfing Adventures where people can take surfing and standup paddle boarding lessons and rent boards.	July 12, 2024
Naomi Leilani Yokotake	Born in 1950 at Līhu‘e and raised in Hanalei, Kaua‘i, Auntie Naomi and her ‘ohana were <i>mahi‘ai</i> , <i>lawai‘a</i> and <i>mea hīmeni</i> in Hanalei. Auntie has been a <i>kumu hula</i> for many years for her group, Hālau O Hanalei. and a <i>kumu kula</i> for over 35 years serving the towns of Kalāheo, Kīlauea, and Hanalei under the State Department of Education. She is the Cultural Director and board member for Hale Halawai ‘Ohana O Hanalei. Auntie Naomi is the choir director at Wai‘oli Hui‘ia Church where she has her <i>hālau</i> .	July 12, 2024
Alice Patricia “Patsy” Kuaihelani (Wilcox) Sheehan	Born in 1943 and raised at Honolulu and Hanalei; Alice Patricia and Michael Sheehan Sr., are parents to Michael Keola Sheehan, Juliette “Lia” Kulamanu Sheehan, and Cynthia Simmons. Auntie Patsy’s great-grandfather is Albert Spencer Wilcox who was married to her great-grandmother, Emma Kauikeōlani Napoleon Mahelona Wilcox. The family owns Hanalei Land Company, in Hanalei and is responsible for 74 acres (0.30 km sq.) of ‘āina. She is on the board of directors for Nāmolokama O Hanalei Canoe Club.	July 12, 2024



Consultant Name	Consultant Information	Date of Interview
Michael Keola Sheehan	Born in 1968, Keola was raised in Honolulu and Hanalei. He is knowledgeable about Hanalei and can be found in the Hanalei Land Company office where he is a principal proprietor. The company offers commercial leasing and vacation rentals. Keola is a realtor serving the north shore of Kaua‘i. Keola is the main <i>kia ‘i</i> for Loko Kauikeōlani and the Kānoa Ponds in Hanalei.	July 12, 2024
Juliette “Lia” Kulamanu Sheehan	Born in 1970, Lia was raised in Honolulu and Hanalei. She is also a part of Hanalei Land Company. In 1996 she graduated from the William S. Richardson School of Law. Lia has over 20 years’ experience in private and nonprofit business management in Hawai‘i. She serves on the Board of Directors for several significant organizations in Hawai‘i, including the Hanalei River Heritage Foundation.	July 12, 2024

## **OUTREACH AND PARTICIPATION**

Upon reaching out to friends and *‘ohana* who have close ties to the local Hanalei community, 22 individuals were evaluated as potential consultants for the project. Following initial contact with the candidates from June to July 2024, six were selected to be interviewed (see Table 2).

To ensure that knowledgeable consultants with the most potential for providing relevant information were chosen for the interviews, the following selection criteria were applied:

1. Individual has a past or current connection to the study area or vicinity.
2. Individual is a known Hawaiian cultural or natural resource specialist.
3. Individual is a known Hawaiian traditional practitioner.
4. The individual was referred to by another reputable person.

## **INFORMED CONSENT PROCESS**

We employed an informed consent process, which follows the guidelines of the American Anthropological Association:

1. Prior to the interview, the ethnographer explained to the consultant the consent process, the project purpose, the intent of the study and how the consultant's information would be used.
2. The ethnographer provided an Authorization and Release Form and reviewed the contents with the consultant. The interview was conducted only after the consultant agreed to participate by signing the form. The consultant was provided with a copy of the form.
3. After the interview was completed, the consultant was given a transcription of their interview, either as a digital file (.docx or .pdf) or a paper copy. The consultant was then permitted to edit, correct, delete, or add material to their interview prior to its inclusion into the CIA.
4. Following revisions, consultants were provided with a copy of their final interview transcription.

## **BIOGRAPHICAL DATA SHEET**

Each consultant had the opportunity to fill out a Biographical Data Sheet (BDS) before their interview. The BDS included entries for the consultant's name, mailing address, phone number, email, year and place of birth, past and present residences, gender, citizenship, ethnicity, spoken language(s), education, occupation, interests, skills, hobbies, religion, past and present involvement in community and/or professional organizations, parents' names, order among siblings (if any), and information about maternal and paternal ancestors. The consultant could choose whether or not to answer any of these questions. During the subsequent interview, the consultant discussed some of the information recorded on their BDS.

The BDS had the following positive outcomes: (1) it helped consultants think about the information they wanted to present about themselves and their families, (2) less time was needed to collect biographical information during the interview, and (3) written biographical information was used to direct interview topics and supplement what was said or not said during the interview.

### ***MAKANA***

Upon arriving at the meeting place for the interview, greetings to the consultants and their *'ohana* included *aloha* and *mahalo*, a *lei*, and some form of compensation. This was done by providing *makana* to individual consultants in the form of a gift certificate from Big Save, fresh *lomi 'ō 'io*, chocolates, Japanese Sakura *arare*, and *ume* candies.

### **INTERVIEW PROTOCOL AND METHODS**

The *'ano hana kūkā kūkā* (talk story, moral quality procedure) was applied to the structure of the interview to allow the consultant's *leo* or voice to be heard. This method encourages a dialogue between the interviewer and the consultant, and permits the consultant to speak about a topic in their own words.

The interviews were recorded using an Olympus WS-823 Digital Voice Recorder.

### **TRANSCRIPTION PROCESS**

Kaumaka Anae transcribed the interviews. After the transcripts were completed and internally reviewed, they were sent to the consultants to be edited and/or approved between July and August 2024. All six consultants provided written or verbal agreement that their original or revised responses could be included. The consent letters are reproduced in Appendix A and the full interview transcripts can be found in Appendix B.

### **DATA ANALYSIS**

All of the interview excerpts included throughout the following sections represents *nā hua 'ōlelo* (the spoken words) of *ka mea e 'ōlelo ana* (the one talking). The excerpts use either the exact words of the consultant, or are paraphrased to insert words that are “understood” or to present similar or related information discussed at different stages of the interview. The excerpts were selected through a thematic analysis of the interviews using a deductive method, and recurring themes within individual interviews and across different interviews were highlighted in the report.



#### IV. CONSULTANT BIOGRAPHIES, INTERVIEW RESULTS AND DATA ANALYSIS

Ethnographic studies are fundamental for determining how a proposed project will affect and/or limit access to culturally sensitive places, resources, and practices. This section contains the biographical sketches and results of the cultural consultations carried out for this CIA. The oral histories collected through interviews were used to document culturally important resources and practices in the area, including specific sites, structures, natural or environmental features (areas or landscapes), and individual and social activities.

The ethnographic study was designed so that information acquired during interviews would help determine if any cultural or natural resources or associated practices, including access to these areas, would be impacted by the Hanalei River Streambank Stabilization project. With this objective in mind, the following basic research themes were incorporated into the interview: (1) *mo'okū'auhau* and *pilina* to *'āina*; (2) Hawaiian cultural traditions and practices; (3) *mo'olelo*, and *wahi pana*; (4) the Historic Period (including the Plantation Era and Rice Era); and (5) comments or concerns about the study area. The research themes have sub-themes that were developed a posteriori (post hoc) based on the oral histories. The responses and collective information were then synthesized into supporting evidence for conclusions about the project impacts on cultural resources and/or practices.

## PATRICK SOLOMON KAMEALOHA HANOHANO PA-SMITH

Patrick Solomon Kamealoha Hanohano Pa-Smith is of Hawaiian descent and was born in 1965 to parents Hanalei E. Smith Jr., and Lillia Kekahuna in Vallejo, California. He grew up in Kaua‘i with his five siblings, four brothers and one sister. Kamealoha currently resides in Anahola. He graduated from Kapa‘a High School and furthered his education at Kaho‘iwai (Center for Adult Teaching and Learning), Nagasaki Wesleyan University, Hawai‘i Pacific University, and the University of Hawai‘i at Mānoa. Currently he is working on his Ph.D. He is polyglot, fluent in Hawaiian, Japanese, English, and Hawaiian Creole English (HCE). Kamealoha has worked as an educator at the immersion school Ka ‘Umeke Kā‘eo in Keaukaha on Hawai‘i Island (Photo 1).

But the word is *ke ‘ōmau* (a word not found in the Hawaiian dictionary meaning sustainability) ... the *‘okina* (glottal stop) and the *kahakō* (macron) above the o. And that is the word they’re using or at least that is the word Kahuawaiola at Hilo is using for the word sustainability.... Kauikeaōlani is meant to facilitate food ... sustainability in the whole Hanalei area.



Photo 1 Kamealoha at a park in Princeville, Kaua‘i, July 12, 2024.

Kamealoha's maternal Kekahuna 'ohana hails from Kailua, O'ahu, and Hāmoa, Maui. His paternal Hanohano Pa 'ohana hails from Kalalau and Nāmahana, Kaua'i. His paternal great-great-grandfather is Charles Titcomb, who was a coffee farmer but also cultivated fruit trees, and owned a silk plantation business—all in Hanalei.

If you look on some of the old maps, some of the family names appear on there. So that would be Kamalenui and Titcomb. So, my great grandmother is a Titcomb, but her mother is a Kamalenui ... Right along the Hanalei River. There are some *kūleana* lands. I know they had a presence there, and I know in their genealogy my great-great grandfather, so my great-grandfather's father—he had 'āina right there on the river.... Great-great grandfather—he's the son of Charles Titcomb ... and Charles Titcomb was from 'Amelika (America) right. And then my great-great-great grandmother who is ... Kamalenui—her last name ... Kanikele Kamalenui. She had other names too, but I don't remember .... And they were from here and—Kīlauea. If you go to Kīlauea, you will see all the names of the streets are named after family members .... And then there's graveyard there, and another graveyard in Wainiha .... I think my great-great grandfather folks—all of them, the Titcombs is buried at Kīlauea.

My great grandfather John Hanohano Pa was from Kalalau Valley. He was—certainly a *konohiki*. From what I remember .... In reading different *mo'olelo* (story) and listening to my own *kūpuna* (elders, ancestors)—he was born in Kalalau Valley, and I think—Kalihiwai, not too far from here ... a little more south ... is one of the places where they would take a lot of the kids and fish—I think he was raised as a fisherman in that area. And then in the Hanalei and Wainiha area I think that's where he learned to be a *mahi'ai* (farmer). For sure ... *kalo*. He was a—*kahu mālama* (caretaker) or *konohiki* I don't know exactly what title it was, but he was very, very knowledgeable about how to engage in *aloha 'āina* (love [of the] land) practices and *mālama 'āina* (care [for the] land) practices. He was very well informed—and he was relied upon by many people of this area. My great grandfather probably lived till—in the '70s. A little after I was born, he passed away. I actually never ... I recollect ... I did meet him one time. Both places [Kalihiwai and Kalihikai] because I think down by the *muliwai* (river mouth) ... that's where I think they did open ocean fishing—pass there right. I would think if you were in that area ... the *muliwai* ... I think what you would probably do was learn how to take care of those open ocean nurseries. It would be more like 'ama'ama, (medium growth stage mullet [*Mugil cephalus*]), *āholehole* (young growth stage Hawaiian flag tail) .... Yeah, and I'm sure they also learned how to do *ho'olei* (to cast or throw [net]) in that area or just a little outside where the reef areas were right. And I'm pretty sure Wainiha, they would pick *limu* (seaweed) all in that area and out here—I would think ... by Pu'u Poa, which is just on the Princeville side of the *muliwai* ... there is a beach area there. All in that area is heavy with reefs. So, I do know they used to go pick 'opihi (limpets) for sure in these areas as well as down by Maha'i and then Wainiha. [What kind of *limu* you guys used to pick up?] Well, I think it would be probably (a soft, succulent, small seaweed [*Asparagopsis taxiformis*]) would be one of them. *Wāwae'iole* (a cosmopolitan tropical club moss [*Lycopodium cernuum*]), I think would be another one. I'm trying to think ... *Manauea* right ... from Hanalei yeah. I think there would have been, and the place I think you would have to go is on the other side of the bay—that is where the reefs are. 'Ōpae'ula (reddish shrimp). As far as 'ōpae is concerned, I would have to say, yes. The reason I venture to say, yes is because when we used to exchange with our 'ohana, they would give us a lot of 'ōpae 'ula, and they used to dry it too. We got *poi* (pudding like food staple made from the taro corm) from the valley areas and 'ōpae ... we certainly got 'opihi from the sea. There was 'opihi, *limu*, and stuff we used to trade. We would go fishing in the Kapa'a area. Whatever we caught, or whenever we got 'ahi (yellow fin tuna [*Thunnus albacares*]), *akule*, (Big-eye or goggle-eyed scad [*Trachurus curmenophthalmus*]) that kind stuff ... *halalū* (young stage *akule*) too. So, whatever we got from that side we would trade with the family from this side for sure. But it's been a long time, you know for us to be engaged in that on a regular basis. It's a lot more simplified because A, you don't have that many resources; and B, you been—they like to museum-ize Hawaiian places.



Presently, Kamealoha is the Program Administrator for the Hanalei River Heritage Foundation. Where he carries on the tradition of *aloha āina*, his love for the land and *mālama ‘āina*, caring for the land.

The framework of using Papakū Makawalu<sup>8</sup> is very important. So, I don’t know if we are supposed to point out specific ... *aloha ‘āina* (love [for] land) is so broad. So, if you are asking me if there are practices, we are doing that our ancestors did—yeah, *aloha ‘āina* and *mālama ‘āina* (caring [for the] land), then for sure ... I’ve been using the *Papakū Makawalu* framework for us to better understand how we can update our traditional resource management practices. For me, *Papakū Makawalu* is the framework of how native Hawaiian people view different ecosystems, and how they view the universe through this study of native ecosystem and how it is divided into resources above us, *papa-huli-lani* ... *papa-nui-hānau-moku*, the resources here on land and in the ocean, and at the core of the earth which is *papa-huli-honua*. And based on that distinction, you can begin to understand also the cosmology, right ... in other words the spiritual practices, how the spiritual and cultural practices sort of intersect each other, and how each deity, *akua* (God), *aumākua* (guardian ancestors), *kahuna* (priests) and *kupua* (demigod, shape shifter) was responsible for specific energy associated with these three ecosystems. And by setting that framework, you can begin to understand that multi-layers of the relations and the human relations between man, nature, and the spiritual world in my opinion ... Anything, whatever we do ... whatever we do, *aloha ‘āina*, it’s an articulation of reverence that we have for our *kūpuna*, even if we may not know all of them right now—I mean the main ones we know ... Lono, Kū, Pele. But there’s so many, and it’s really important for a place like Hanalei, because you see the phenomena of flowing waters, and you see the phenomena of the fish—the *‘ama ‘ama* and some other fish in the area.

## MITCHELL KA‘ANOHELANI ‘ĀLAPA

Mitchell Ka‘anohelani ‘Ālapa is of Hawaiian and Samoan descent and was born in 1954 to parents Elwood ‘Ālapa and Pearl Leimomi Auld Kanae ‘Ālapa. Mitch has four siblings, one sister and three brothers. He was born in Hau‘ula, O‘ahu and raised on Kaua‘i since the age of two. He grew up in the towns of Hā‘ena, Wainiha Hanalei, Anahola, and in Kapa‘a he went to St. Catherine’s Catholic School. At St. Catherine’s he learned the word perseverance, and it is a word he carries with him throughout his life. His stepfather raised him and was always by his side. His stepfather is from the Kaneali‘i *‘ohana* who hails from Wainiha. In his 20s and 30s he lived in the valley of Kalalau for 13 years where he mainly depended on the *‘āina* and *kai* for sustenance. He presently resides in Kīlauea. Mitch is a descendant of Mō‘ī, Kaumuali‘i and of son George Humehume. He is a *mea hīmeni*, *mahi‘ai*, and *lawai‘a*. After being a *he‘e nalu* of big wave surfing, he traded his surfboards for his two Harley Davidson motorcycles. He is married to Lynn ‘Ālapa and they have three children, two daughters and a son. They also have three grandchildren (Photos 2 and 3).

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<sup>8</sup> Papakū Makawalu: Edith Kanaka‘ole Foundation. <https://edithkanakaolefoundation.org/papakuMakawalu.php>. “Papakū Makawalu is the ability of our *kūpuna* to categorize and organize our natural world and all systems of existence in our universe.”



Photo 2. Mitch at a parking lot in Princeville, Kaua‘i, on July 12, 2024.

Mitch and his wife Lynn started a business in Hanalei called Hawaiian Surfing Adventures about 28 years ago. The business offers individuals and families the chance to learn how to surf and standup paddle board and rent boards. He and his cousin, Titus Kinimaka, both have surf schools in Hanalei. The business now belongs to his son, Little Mitch, and wife Lynn runs the business. Little Mitch has a Cane Corso at the shop, a work dog.

[So how long does your surf lesson last?] Hour and a half. And we teach the blind. I’m the only guy, when Bethany Hamilton got bit, she couldn’t handle the love she was getting from the world, she didn’t know what to do because everybody with a handicap wanted to come here, yeah. I helped her out on her first escapade. And then, I told myself I cannot be doing this all the time, that’s going to take too much from me. They gotta go do their own—I don’t have time for this because I *kōkua* (help or work done without payment) that, right. My love, right. I love the water, but I couldn’t do this all the time so, Bethany went and found her own little niche and got her niche going. Somebody

else jumped on her niche and started Koa. That's how Koa started in Honolulu for the handicap. But it all started from Hanalei with Bethany.

That dog is a work dog you know [referring to the Cane Corso, a dog that hangs out at the surf shop in Hanalei town]. That dog is a good dog. The dog surfs.

Mitch is considered one of the legends of surfing along with Duke Kahanamoku, Eddie Aikau, Rell Sun, Clyde Aikau, Derek Ho, and Buffalo Kalolo'okalani Keaulana honored by the State senate, an initiative spearheaded by Representative Roland D. Sagum and state Senator Brickwood Galuteria. The honor was publicized in the July 2010 issue of Surfer magazine (Surfer 2010).



Photo 3. Mitchell outside of Hanalei Bay *he'enalu*, July 2010.

## NAOMI LEILANI YOKOTAKE

Naomi Leilani Yokotake was born in 1950 to parents Howard Yokotake and Marjorie Maka. She was born in Līhu'e and raised in Hanalei. Her father's parents, the Yokotakes, hailed from Waimea and Makaweli on Kaua'i's west side. Her paternal grandfather also came from a family of 13 from parents who were immigrants from Japan. He developed Waimea Poi Factory, a business that disbanded within the last 23 years. Her Yokotake grandfather moved to Hanalei to raise *kalo* to send back to Waimea for milling. He ended up forming a *hui* (association, team) with all the *mahi'ai* in Hanalei who were raising *kalo* and most of them were Japanese. The *hui* would sell *kalo* to Haleiwa Poi on O'ahu, which has been a big *poi* distributor for many years. Aunty Naomi's brothers grew *poi* to earn their keep in the '*ohana*. Her father worked on the farm for a while, and later decided it was too much hard work. The Yokotake '*ohana* raised



*kalo*, *laiki*, and cucumbers. *Mahia'ai* was a part of Aunty Naomi's everyday life growing up in Hanalei. She also participated as a *lawai'a* in the tradition of *hukilau* at Hanalei Bay. Her maternal grandfather from Hā'ena, Jacob Maka, was a Hawaiian *mahi'ai* raising *kalo* in Kē'ē, and he had a tiny *poi* mill. They sold the *poi* to people in Hā'ena. Both her paternal and maternal *'ohana* raised the *lehua* variety of *kalo* (Photo 4).



Photo 4. Aunty Naomi at the Hanalei Land Company Ltd. office in Hanalei, Kaua'i on July 12, 2024.

Her Hā'ena *'ohana* are also musically talented. She and her *'ohana* were exposed to music at all times, and it was a blessing because it kept them close to their roots and language because Aunty Naomi was raised at a time when the Hawaiian language “wasn't fashionable, it wasn't pono to speak Hawaiian ... or even ... practice your cultural practices” (interview with Aunty Naomi July 12, 2024). She and her *'ohana* are strong members of the Wai'oli Hui'ia Church where herself, her mother, and grandfather Jacob were once choir directors of the church. Aunty Naomi is a *kumu hula* (hula teacher) and has a *hālau* or school of *hula* called Hālau O Hanalei at the church. She has been a *kumu kula* (schoolteacher) with the Department of Education (DOE) for 35 years, at Hanalei, Kalāheo, and Kīlauea on Kaua'i. She teaches Hawaiian Studies in the public schools Kūpuna Program. Aunty Naomi is the Cultural Director at Hale Halawai 'Ohana O Hanalei and the creator of the original Halele'a Exploration Program curriculum and is an active volunteer. She was the past president of the Hanalei Hawaiian Civic Club.

**SHEEHAN ‘OHANA: ALICE PATRICIA “PATSY” KUAIHELANI (WILCOX) SHEEHAN, JULIETTE “LIA” KULAMANU SHEEHAN, AND MICHAEL KEOLA SHEEHAN**

Alice Patricia “Patsy” Kuaihelani (Wilcox) Sheehan was born in 1944 at Kapiolani Children’s Hospital in Honolulu, Hawai‘i to parents Louise Dorothy Hakaleieponi (Shingle) Wilcox (1915–2009) and Albert Hart Wilcox (1911–1984) (Kaua‘i Historical Society 2012; Family Search 2024). She is a native of Hanalei and of Hawaiian and Caucasian ancestry. Alice Patricia and Michael Sheehan Sr. are parents to Michael Keola Sheehan, Juliette “Lia” Kulamanu Sheehan, and Cynthia Simmons (Photos 5–7).



Photo 5. Aunty Patsy in a photo taken by *The Garden Island Newspaper* June 30, 2011 (Frainier 2011).

Aunty Patsy’s maternal grandparents are Robert Witt Shingle (1875–1935) and Ethel Muriel Kuaihelani Campbell (1890–1951) who were married on February 18, 1909 (Family Search 2024). Aunty Patsy’s paternal grandparents are Ethel Kulamanu Mahelona Wilcox (1887–1954) and Gaylord Parke Wilcox (1881–1970) who were married on March 10, 1909 (Family Search 2024). Aunty Patsy shares a birthday with her great-grandmother, Emma Kauikeōlani (Napolean) Mahelona Wilcox (1851 -1931) who married Albert Spencer Wilcox (1844–1919) on June 7, 1898. Her great-grandparents and list of her ‘ohana are legends who helped saved lives in the Hawaiian communities. The year 2012 was marked as the 100th celebration of the children’s hospital operating in conjunction with Kapiolani Maternity and called

Kapiolani Women's and Children's Hospital (Kaua'i Historical Society 2012). Every year she leads an annual celebration at the hospital to honor her great-grandmother Emma by presenting an annual award to an individual who has gone above and beyond their daily duty for their outstanding concern for work and with children. Her *'ohana* is filled with influential people who have aided the foundation for the business and medical industry of Hawai'i, and who also are notable philanthropists. Today, the philanthropic legacy of Emma and Albert lives through Aunty Patsy and her children. An article in *The Garden Island Newspaper*, June 30, 2011, about Aunty Patsy recognized that "her passion for history and her efforts to preserve Hawaiian culture with the utmost sensitivity has not gone unnoticed." She received an award for her contributions to Kaua'i at a ceremony where she was honored as one of five "Living Treasures" recognized by Kaua'i Museum. "Since 1988, the museum honors people as "Living Treasures" for their contributions to culture, education and the welfare of the people of Kaua'i and Ni'ihau" (Frainier 2011).

Aunty Patsy can be found canoeing up and down the Hanalei River or spending time with her *'ohana* or with nature. She is on the board of the National Tropical Botanical Gardens. She is on the board of directors for Nāmolo-kama O Hanalei Canoe Club. The family owns Hanalei Land Company in Hanalei and is responsible for 74 acres (0.30 km sq.) of *'āina* and 20 acres is *loko* or *wai*, but they *mālama 'āina* and *kia'i* the entire common areas of Hanalei. The historic Kauikeōlani Estate is the gem of Hanalei Land Company. The family has spent at least 20 years restoring Kauikeōlani Estate replicating its natural beauty from the late 1800s to early 1900s. It hosted four generations of customs and traditions. The floods and hurricane made the task challenging. Kauikeōlani Estate sits near the mouth of the Hanalei River just several meters from the sands of Hanalei Bay (Photos 8 and 9). It is an open area with spacious lawns, fruit trees, gardens, with less than 20 structures, Loko Kauikeōlani, and Kānoa Pond (Frainier 2011).

Michael Keola Sheehan was born in 1968, the eldest child of Aunty Patsy and Uncle Mike Sheehan. Keola was raised in Honolulu and Hanalei. He is knowledgeable about Hanalei and can be found in the Hanalei Land Company office where he is a principal proprietor. The company offers commercial leasing and vacation rentals. Keola is a realtor serving the north shore of Kaua'i. He enjoys *he'e nalu* and does *hoe wa'a* with the Hanalei Canoe Club. Keola is the main *kia'i* for Loko Kauikeōlani and the Kānoa Ponds in Hanalei. He is a part of the Hanalei Community Association and was working on a project to create walking paths in Hanalei which the State plans to do within 2024 (see Photo 6).



Photo 6. Keola at the Hanalei Land Company Ltd office on July 12, 2024.

Juliette “Lia” Kulamanu Sheehan was born in 1970, the second child of Auntie Patsy and Uncle Mike Sheehan. She was raised in Līhu‘e on Kaua‘i while going to Wilcox Elementary School and in Honolulu while attending Punahou High School, her alma mater. From 1988–1992, she earned her undergraduate degree from Willamette University in Salem, Oregon. In 1996 Lia graduated from the William S. Richardson School of Law. She is an active member of the *hālau hula*, Ka Pa Lehua from 1993 to present. She is also in the family business of Hanalei Land Company from 1997 to present. Lia has over 20 years’ experience in private and nonprofit business management in Hawai‘i. She serves on the Board of Directors for Awaiaulu, James and Abigail Campbell Family Foundation, Atherton Family Foundation, and Hawai‘i Community Foundation. She along with her father, Michael Sheehan Sr., is on the board of directors for the Hanalei River Heritage Foundation. Lia and the ‘*ohana* were in Hanalei helping with the hurricane Iniki 1992 post-disaster cleanup and the 2018 flood post-cleanup. The Sheehans are all active members in the Hanalei community (see Photo 7).





Photo 7. Lia from the Hanalei River Heritage Foundation (Hanalei River Heritage Foundation 2024).

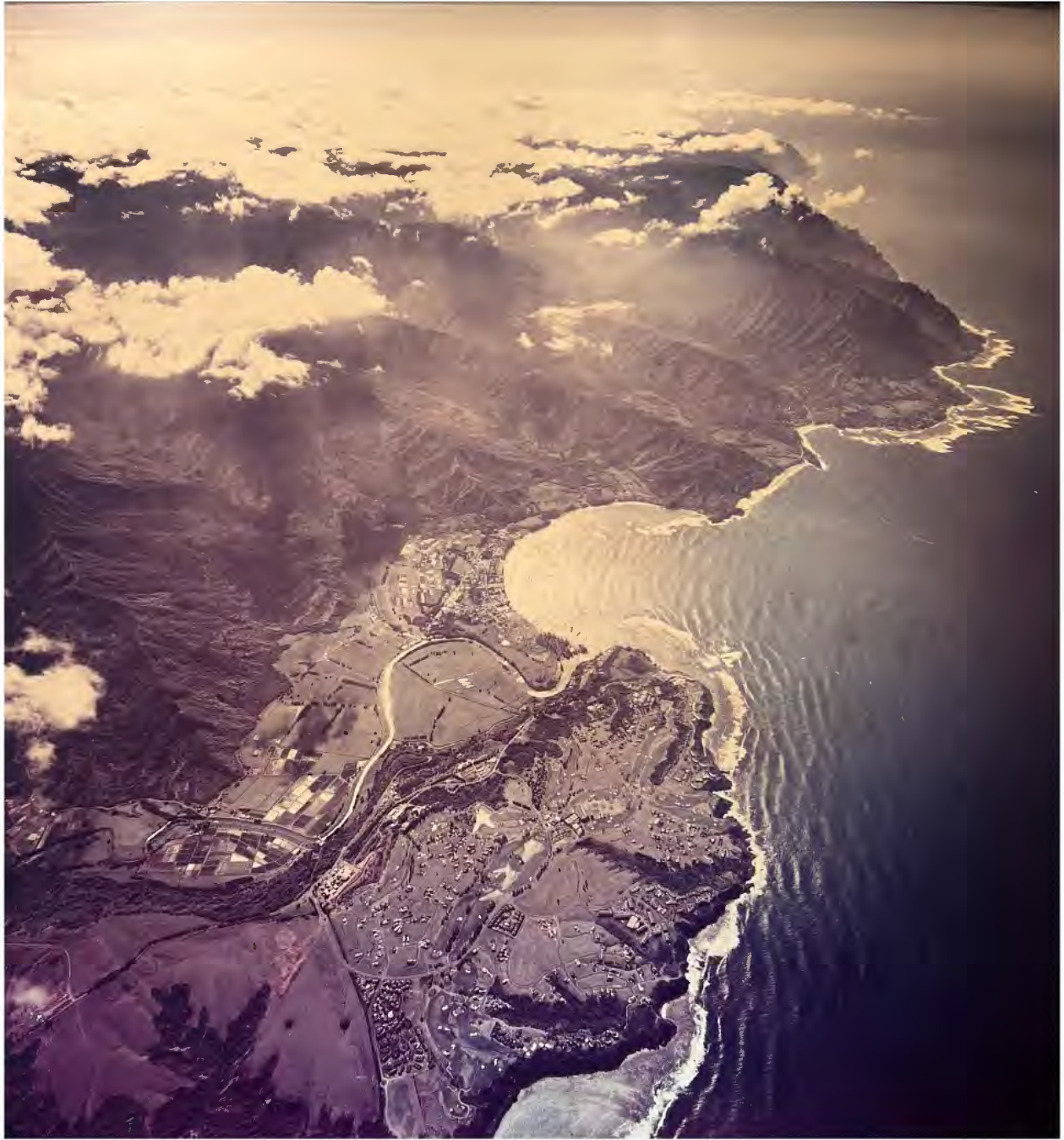


Photo 8. Aerial photo of Hanalei and the northern coast of Kaua'i. The date of the original photo is unknown. Photo courtesy of Hanalei Land Company.





Photo 9. Photo of Hanalei, Kauaʻi. The date of the original photo is unknown. Photo courtesy of Hanalei Land Company.

## THEMES

The following information summarizes the Hawaiian traditional customs and practices in the Hanalei area into themes as relayed or verified by the interviewees previously mentioned. A map (Figure 8) and accompanying table (Table 3) places and lists the Hawaiian traditional customs and practices. The themes provide a bird's eye view of the recognized Hawaiian traditional customs and practices and the *Kuleana* section peers closely into the concerns of the consultants in Hanalei.



Figure 8. A 2023 World Imagery Map indicating the project area and locations of traditional customs and cultural practices.

Table 3. Locations of Traditional Customs and Cultural Practices.

Number	Traditional Customs and Cultural Practices	Additional information
1	<i>Lawai 'a</i> and <i>Kilo</i> : <i>Lawai 'a</i> for salt and freshwater fish. In Hanalei River from the location to <i>makai</i> saltwater fishes (mud crab, 'oama, 'ōpelu, akule, ulua, moi, 'ama'ama, and 'āholehole). In Hanalei River from that location to <i>mauka</i> freshwater fish (mud crab, 'ama'ama, 'o'opu, 'ama'ama, and 'āholehole). <i>Kilo</i> for Project Mālama Ola Native Fish Habitat Research: 'ama'ama.	by the Hanalei Bridge
2	<i>Mālama 'Āina</i> and <i>Mahi'ai kalo</i> , rice, and cucumber	before the Hanalei Bridge
3	<i>Mālama 'Āina</i> 2022 Streambank Restoration	small oval area
4	<i>Mālama 'Āina</i> Old Boundary for the Ponds of Kānoa: According to Keola Sheehan, the pond was named after the governor of the area, Kānoa who was the official <i>konohiki</i> before Albert Spencer Wilcox purchased the 'āina. Kānoa lived by ponds. Originally there were three ponds belonging to Ponds of Kānoa or Kānoa Pond. A portion of Kānoa Pond is renamed Loko Kauikeōlani because it is located adjacent to the old family house. The other two ponds became active fishponds. Aunty Patsy states, when Kānoa was <i>konohiki</i> , the Kānoa Ponds were under <i>kalo</i> cultivation and then rice cultivation, and the <i>mahi'ai</i> was leasing the land from Kānoa. After Albert Wilcox purchased the land from T. C. B. Rooke and A. S. Nu'uano, the <i>mahi'ai</i> leased it from Albert. When the <i>mahi'ai</i> left rice went out and it was only under <i>kalo</i> cultivation. Within the Kānoa Pond another pond was constructed by her grandfather, Gaylord to raise bass, and it was fed entirely by a freshwater <i>auwai</i> . Within modern day, the Kānoa Pond became a 14-acre (0.06 km sq.) marsh completely overgrown until it was restored under the direction of Buddy Keala and commissioned by the Sheehan 'ohana.	large oval area
5	<i>Kilo</i> fisheries for the Project Mālama Ola Native Fish Habitat Research 'ama'ama. [Indicated by Kamealoha.]	small circle
6	<i>Kilo and Mālama</i> : <i>Ko'a Kū'ula no Kanaloa</i> (fishing shrine for Kanaloa) [Indicated by Kamealoha.]	
7	Hanalei Pier: <i>Lawai 'a</i> off the pier in the arly morning for <i>pāpio</i> and 'ōpelu. <i>Lawai 'a</i> off the pier for 'oama.	
8	<i>Hoe wa'a</i> : Two canoe clubs: Nāmolokama Canoe Club and Hanalei Canoe Club. They paddle on the Hanalei River in the winter and in the ocean in the summer or when the ocean is calm.	
9a	<i>He'e nalu</i> lessons and regular surfing. On the beach, near shore, and out in the open ocean.	

Number	Traditional Customs and Cultural Practices	Additional information
9b	Standup Paddle Boarding: Near the shore and on the Hanalei River	
10	<i>Ho‘omana Kalikiano, Oli, Mele, Hula, and ‘Ōlelo Hawai‘i</i>	Wai‘oli Hui‘ia Church
11	<i>Lawai‘a: Hukilau style for ‘ōpelu and halalū</i>	
12	<i>Lawai‘a: He‘e</i> for those who are not afraid of the 18 feet [548.64 cm] long <i>manō</i>	
13	<i>Hālau</i> or office to <i>halawai</i> for <i>mālama ‘āina</i>	Hanalei Land Company
14	<i>He‘e Nalu</i> and Standup Paddle Boards: A shop with an area where surfboards and paddle boards are stored.	Hawaiian Surfing Adventures

## *IWI KŪPUNA*

Although, the *iwi kūpuna* is not marked on the map, they do exist in Hanalei, and the Sheehan 'ohana took the time to help recover and reinter the remains.

### Lia Sheehan:

Kaumaka, I was just going to share. I don't know if anyone shared with you, but we do have *iwi* (bone, especially human) on the property, and we have relocated some *iwi*. I'm not sure if that's a conversation you want. Mom knows more about it. I just know we have some.

### Keola Sheehan:

Yeah, we planted a little area for them—It was next to the fishpond when we were trying to do the shrimp pond in the back area by one of the Kānoa Ponds.

### Aunty Patsy Sheehan:

There was another one. *Lei*. That was the other one behind Allen's yeah

### Keola Sheehan:

But she was—I think we found some fingers, digits. Based on the size of the digits alone or of the bone that it was from a *braddah* who was probably 7 feet [213.36 cm] tall ... like a big guy—So he's over there by where Dr. Greenthumb is right?

### Aunty Patsy Sheehan:

And then we sold the piece that Opunui thought that he remembered that one of his relatives was buried under a tree. Well, there were 99 trees by that time.

### Keola Sheehan:

Atwood Makanani them, right?

### Aunty Patsy Sheehan:

Atwood Makanani. But it was his cousin who was saying—that he felt like there was *iwi* here and *iwi* there, and under the mango tree, but my land goes from the mango tree to the fence.

### Keola Sheehan:

Old time markings, right?

### Aunty Patsy Sheehan:

So, we dug around the mango tree and there were four mango trees or something like that, no we never found any, but we found something in a whole other part which Gabriel E said that his grandparents lived in front of the lot that we were going to sell. And he said that he remembers his grandparents being buried in the back of the lot which—what was the lot size, nobody knew. Between this lot and this lot, it could be in here or in here. So, we looked around and we found some and we made a little corner with rocks and then we wrote in the ... when we sold it, it has even and you couldn't do anything, don't dig it up, that kind of thing.



### KILO, MĀLAMA 'IA, AND LAWAI'A

As Executive Director of Hanalei River Heritage Foundation and a cultural practitioner, Kamealoha Hanohano Pa-Smith understands the importance of *kaulana mahina* (lit., famous moon; observance of non-activities/activities for certain moon phases) and importance of *kilo* or to examine and observe our natural elements, especially the resources. Kamealoha pointed out the places of *kilo* for 'ama'ama, and where the *kū'ula* or fishing shrine honoring Kanaloa is *mālama 'ia* (cared for) (see Figure 7, Table 3).

Hanalei, if we talking about practices and stuff, of course, the idea of *kilo* is important, and any of those practices that has to do with *kilo* ... fishing, *kilo* that has to do with the moving of tides, *kilo* that has to do with the weather patterns ... so anything to do with *kilo* I think is still quite strong here on this side of the island.

I would say, for us it's about re-establishing these practices, especially in this area right. We started by spending a lot of time on the *muliwai* (river mouth) and seeing what kinds of fish are there. We did focus on the 'ama'ama. So ... if you talk about that as a conservation method ... that for sure.

Mitchell 'Ālapa is a strong waterman who enjoys *lawai'a* equally as much as eating the fish he catches. He talks about fishing in the Hanalei River, at the Hanalei Bridge, off the Hanalei Pier, and the *he'e* in the area out of Waikoko and Waipā.

[So, have you ever fished in Hanalei River?] Yeah. I catch mullet, what else I catch over there .... *Ulua*, what else 'oama (young of the weke or goatfish) .... They go all the way up to the bridge. And the *akule* (big-eyed or goggle-eyed scad fish [*Trachuroops crumenophthalmus*]), all the way up to the bridge, yeah. Hanalei Bridge, the *akule* go all the way up to the Hanalei Bridge and the *āholehole* (Hawaiian flag tail [*Kuhlia sandvicensis*]). Mullet, *āholehole*, *moi* (Threadfish [*Polydactyls sexfilis*]) .... Right on the edge, right on the pocket. Eh, the state, the county guys jump off their machine and come help me surround 'em. Eh, in their work clothes they jump off the county machine, run in the water, block for me, and I surround 'em.

[Referring to fishing in Hanalei River at night, paddling pass the area of the project.] Even nighttime with the throw net. Mullet, *āholehole*, yellowed belly ones. Good in the frying pan. I would rather have *āholehole* than mullet.

[Referring to the traveling 'oama.] ... working its way this way from Fuji Beach in Kapa'a, coming around to Rock Quarry down here in Kaili, from Kaili coming around to the park by Kalihiwai, and from there spread down to 'Anini by the *kamani* trees, and then work its way around the corner to Princeville—So, what I usually do I get the 'a'ama crab (black crab [*Grapsus grapsus tenuicrustatus*]), smash it all up, put it in the net bag, tie it to the tree, and I hang 'em from the *kamani* tree over the water. So, they all come hang out over there.

Right now, *halalū* is supposed to be coming. I got one 2-inch eye [referring to the eye of his throw net] supposed to be coming, it didn't even touch water yet, with the rope for the pier [referring to Hanalei pier]. That's why you gotta get up 5:00 in the morning and you gotta be at the pier before the first guys splashes the water with the boat. Yeah. You gotta be the first guy there so you can yell at people to stay out of the water. So, if you get there first, they listen. Especially, if they see you walking on the pier, both sides, zigzagging with the net, they know, no go over there. I don't let anybody splash the water until after my first throw. So, I have fun in Hanalei. So, everybody who knows me, they know I like that. They all understand Uncle Mitch. They all call me Uncle Mitch, right. But they all understand me. I go first, you see me over there with my net, don't touch the water okay. You can have the water after I'm done. All the guys my age fish, they all do the same thing, right. They all come down, and we all look at each other, right. So, we watch the whole beach, and everybody looking for the red, and the dark, right ... the shadow, right. Get all the *pāpio* (young stage growth of the *uluu* or game fish) running along the front right now, but everybody waiting for

the *‘ōpelu* (mackerel scad [*Decapterus pinnulatus* and *D. maruadsii*]) right now. All the *‘ahi* (yellow fin tuna [*Thunnus albacares*]) boat guys like ‘em, yeah. It’s like cracked seed the *‘ōpelu*.

[So, how’s the *he’e* (octopus)? Not going be in the inside of Hanalei, going be on the outside right?] Yeah. On the other side, Waikoko or Waipā, on that end. But not too many guys like go because get one big 18-footer [243.84 cm] out there [referring to a shark].

Aunty Naomi Yokotake recounts her life growing up in Hanalei *lawai ‘a* in the rivers and ocean. In the river there would be *‘ōpae* and *‘o‘opu* which would be cooked *lāwalu* style. Also in the river, they would catch big mud crab called Samoan crab. In the ocean they would practice *hukilau* for the *‘ōpelu* and *akule*, and her grandmother pole fished *‘oama* off the Hanalei Pier.

[When you were young ... back in the ‘50s, you used to see *‘ōpae* (shrimp) ... *‘o‘opu* (goby fish; general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae)?] *‘O‘opu*, a lot. Yeah, and they used to net it yeah. They were able to net it and they would go around, and sell it. [How they used to make ‘em, prepare ‘em?] Mostly *lāwalu* (fish or meat wrapped in ti leaves for cooking) style as far as I remember. Maybe ... every time when get big rain in August or September, you see all the Filipinos on banks. (Chuckles). [So, you guys would catch Samoan crab, mud crab inside the river?] Inside the river, yeah. Yeah, big kind.

*Hukilau* (a fishing practice using a seine net by several to many people pulling the net) was always ... the activity of the day. [Down where?] Hanalei Bay. The fish. *Akule* ... sometimes *‘ōpelu* (mackerel scad [*Decapterus pinnulatus* and *D. Maraudsi*]). Schools, huge schools. So, every, every ... during the summertime it was so prolific you know ... the fish kept coming in and coming in. Ah ... yeah, in the ‘50s ... I was a young child, and you know ... your mom says, you don’t due to the beach unless you finish your chores, you finish your chuses, then you can go to the beach; and then you can go to this beach, you cannot go to that beach. But *hukilau* days ... *hukilau*, you can go anywhere—just go and *huki* (pull [the net]), because you need to bring home fish. (Chuckles.) Yeah. So, you get your *mahele* (portion [of fish]), you go home, and everything is fine. You don’t get *lickens* (Hawaiian Pidgin for spankings or beatings) because you wet, you don’t get *lickens* .... You are bringing home your fish ... in your shirt ... (chuckles) ... because no more plastic bags, yeah, those days. So, you ... take yourself over there, and if you get your fish, you put ‘em in your shirt, and you come home. (Chuckles).

Crabbing, *‘o‘opu* fishing, *hukilau*, and my grandmother used to go hook *‘oama* (young of *weke* [goatfish] or Mullidae), she loved to hook *‘oama* off the pier.

Aunty Patsy recalls her grandfather Gaylord creating a freshwater pond within the Kānoa Pond boundary, fed from an *‘auwai* where he would raise bass. Aunty Patsy and Keola had a conversation in reference to the time she explained to archaeologist William “Bill” Kikuchi what ponds were the original ponds of Kānoa.

#### Aunty Patsy Sheehan:

Bill Kikuchi did research, and he took pictures, and labeled the ponds, the ponds of Kānoa. But he took ... he said, this is a Kānoa Pond, and by that time the ponds ... they had been in taro, then went to rice ... after rice, the lessees of those pieces, were leasing the land from Kānoa. And then, when Albert got it, they were leasing it from Albert. But when they left and when rice went out, taro came back right. And I don’t know the timetable, but after that the land was fallow. So, what we considered the Kānoa Pond, a 14-acre [0.06 km sq.] marsh that’s completely grown over, you’d never know it was a pond anymore. So ... but he took a picture of another pond, and called it one of the ponds of Kānoa, but his picture did not match his verbal explanation.

Keola Sheehan:

The original description [referring to Kikuchi's photo and description not matching].

Aunty Patsy Sheehan:

Then when we did it was—well this picture says this, and this ... And I said that pond is this pond, so are you calling this one a Kānoa Pond too just for the hell of it? And so, finally we—in my lifetime, the middle pond—I heard from my grandfather made, so that couldn't have been a Kānoa Pond. Was it or wasn't it—it had a spill way it was....

Keola Sheehan:

Like a freshwater pond, right?

Aunty Patsy Sheehan:

Yeah, it was a freshwater pond.

Keola Sheehan:

It was fed by the 'auwai (canal, ditch) from the taro fields?

Aunty Patsy Sheehan:

From the taro patches.

Keola Sheehan:

So, it didn't have that saltwater feed that a lot of fishponds do, that ebb and flow. It was a one-way freshwater that they put ... they grew bass in. He raised bass in it. And then that spill way went into the other pond which led to the river. Traditionally, a one-way freshwater pond.

Aunty Patsy Sheehan:

It went from the mountain to the sea but when Hanalei started to be developed then ....

Keola Sheehan:

The 'auwai got blocked and diverted.

Aunty Patsy Sheehan:

Yeah. People cut the trees and filled up the ditch and therefore, they were no water coming in so .... It just ... overgrew so, as much as you say this should be conservation or whatever. It's at the ponds you can see the stage of what happens when you don't take care. It just becomes ....

Keola Sheehan:

Yeah. You got to *mālama* (take care of, maintain, protect, preserve) or it just becomes a swamp.

## *MĀLAMA ‘ĀINA AND MAHI‘AI*

Kamealoha Hanohano Pa- Smith spearheaded a project with the backing of the Sheehan ‘ohana in 2020 to 2022 to clear *hau* and plant other conducive plants suitable for the environment and which would be less intrusive (see number 3 on Figure 7, Table 3).

### Aunty Patsy Sheehan:

We tried to do a pilot project thing to clean the *hau* on our side of the which is this side, down just a little bit. And we took what a quarter mile.

### Keola Sheehan:

Just about 500 ft. [15, 240 cm] section of *hau* bush out. Kamealoha actually was spearheading that project so.

### Aunty Patsy Sheehan:

We tried to do it all by hand and not get in the river and the water, so we didn’t have—I think we had some of those yellow things [referring to the turbidity curtains] going. But we just took it from the root and we ... They pulled all the branches, and we cleared that much 20 feet [609.60 cm]. And now you can get three boats up there, and when you turn the corner, you can only have two boats, you go up a little further, you can only have one boat. So, but we just said, hey just give us some money and .... One, you gotta get the landowner to say yes, I’ll let you on my land. But Kamealoha and their gang did great, and they had a chipper, and then they just spread it all—

### Keola Sheehan:

The mulch—keep the weeds down

### Kamealoha Hanohano Pa-Smith:

We also looked at the *hau* bush as a conservation practice to see how we can better manage the *hau* bush so we can work to mitigate. And then we did ... you didn’t see it yet, all the transplanting ... when you see Aunty Patsy folks ... all of the transplanting, we did all of that. We wanted to take out the *hau* bushes right, so we needed to stabilize the stream bank, and so all the initial work was done by us and mostly done by hand. Along the banks of the Hanalei River. We took out the *hau* bush with a small, small excavator, and most of it was done by hand machete, and some power tools. Oh geez, we did that for about a year. We wanted to continue ... 2020 ... 2022, in that timeframe. We started planning a long time ago but ... we wanted to probe at planting native plants ... *kalo* ... people donated that, ti leaf .... There were also some non-invasive grasses that were in there that we thought would be compatible with stabilizing the ... When we chipped all of the *hau* bush ... we spread all the *hau* bush on the bank itself ... to stabilize ... that acted like compose, and then we planted some Hawaiian plant there, that was done by Aunty Patsy. But most of it was done by us, and then ... And the water, because never had any irrigation or stuff like that, we literally had to walk ... Yeah, had to bring the water out of the river and then put it onto the plants itself or go ...

We did that’s why we started ... We’re trying to be an example ... *Hana me ka ‘ike*, ‘a’ole me ka *waha* (work with the knowledge, not with the mouth) ... So, there is a lot of *waha* (mouth) ... I was a volunteer at that point too. There were other things I was getting paid for but ... We weren’t able to convince people that the work was important enough right. We did it with the combination of non-profit funds, Uncle Mike [Sheehan] put in some, Keola, and Aunty Patsy guys put in some, and then we did a lot of volunteer work. But we wanted to show people that if we did things you know, *Hana me ka lima* (work with the hands), *lima lalo* (hands down) ... right. So, we trying to show and

demonstrate, and we were very sensitive to the time of the days that we did this—during the time of the day our ancestors would, we were very cognizant of planting to make sure we didn't plant on the 'ole (referring to a Hawaiian practice of moon phases of when or when not to plant and 'ole is a time of no planting), moons and things like that ... So, yeah, the whole project was based on us trying to replicate or think of what our ancestors would have done. So, to our credit ... we did do that. Money talks and so ... the people with the bigger machines, and the people ... who are politically connected, are closer to whoever makes the decisions—inevitably, they won out. The reason why we stopped doing that we didn't have any money ... 2022 is when we stopped yeah. We wanted to continue. It looks good on the Sheehan side, on the Hanalei side .... What was really interesting ... literally we had to go inside the river, and literally we had to ... be resilient and resourceful in what we did so that we could make sure we were honoring ... to the best of our ability .... Oh yeah ... I love doing that kind of work. I love it, I really do. I'm excited to get another chance to do something like that ....

Aunty Patsy and Keola Sheehan recollect the beautiful Loko Kauikeōlani project and appointing of Uncle Buddy Keala (an acclaimed and highly recognized traditional Hawaiian fishpond aquaculturist) to head the project. Aunty Patsy, Keola, and Lia belong to the organization KUA (an organization called Kua'āina Ulu 'Auamo), whose main focus is to support the betterment of Hawai'i's natural and cultural resources such as sacred landscapes, fisheries, streams, forests, and reefs.

Keola Sheehan:

We did a restoration on one pond, the six acres [0.02 km squared], we call now Loko Kauikeōlani, which Buddy Keala came and helped us do. He was on Moloka'i and came over, and he was just like ... six years ... that was a lot of restoration ... and he helped us do it. It looks ... pretty and is healthy. It's a more traditional fishpond in a sense of what most people think is a pond. And other areas they labeled as Kānoa Pond is in various states of decay and swamp ... neglect I should say, not decay. Neglect, you know. Mmhmm. The silt curtains, all that stuff, right? The turbidity curtains, the floating booms or whatever. A lot of best management practices (BMP) to deal with water, right? We'd have to do it in 100-foot [30.48 m] sections, so Buddy would have to, we would have to boom out a 100-foot [30.48 m], then he would do his little like silt removal, and take .... He was almost up to his chest in water like just a big trash pump, just sucking, vacuuming silt. Just the muck out of it, trying to get sand, hard clean sand, and then push it all to the side, and then take a picture, do whatever his little water quality is, write it down, and move it over submit it to the Department of Health clean water ... it was brutal. Poor guy, he was in the water like for eight hours a day. But he loved it, well I wouldn't say that he loved it, but he was committed to it.

Aunty Patsy Sheehan:

Too many permit regulations to just clean a pond. You almost have to have ... a business and be ready .... We had to get all these yellow turbidity [curtains] .... Yeah, but I think that kind of data hadn't ... you know how deep is deep, and where is the sand. The sand level went kind of like this—we had the tilapia coming in from the river, and they were eating the bank. The bank was falling in, but that is where they nested, and they would go and eat the mullet *pua* (baby mullet). And they were winning the battle, so we were closing up all that....

Keola Sheehan:

It was getting shallower and wider over time, and there would be like because there was no depth ... temperature gradient so it would get very warm, and we would get algae blooms—all the fish would die.

Aunty Patsy Sheehan:

All the *ulua* (game fish; certain species of crevalle, jack, or pompano) would die. We had two ....

Keola Sheehan:

All the *ulua* would float. Well, there is again. Now it's healthy because it's got depth.

Aunt Patsy Sheehan:

But it hasn't gotten to the *ulua*, 60-pound, 70-pound size.

Keola Sheehan:

Yeah, it's still 10 and under. Yeah, but anyway, it was a lot of work.

Aunt Patsy, Keola, and Lia belong to the organization KUA (an organization called Kua'āina Ulu 'Auamo), whose main focus is to support the betterment of Hawai'i's natural and cultural resources such as sacred landscapes, fisheries, streams, forests and reefs. The 'ohana is committed to *mālama* and steward Hanalei, land, river, and ocean.

Lia Sheehan:

We participate in KUA's (an organization called Kua'āina Ulu 'Auamo) loko i'a *hui* (organization, association) anyways .... So, we've gotten to ... Hi'ilei there, Kevin Chang. I think that whole network is .... I'm hoping to tap into them when we are ready to do more restoration. But I think it's amazing to hear all the stories of folks going, you know restoration work around the islands. Yeah, definitely a committed group.

[You guys have any 'ōlelo no 'eau (proverb, wise saying) or any wise sayings .... even English ....] I'm going to say in English, we don't have it on a t-shirt, but I mean we're absolutely committed to the place [Hanalei] and—doing the right thing. I think we live *mālama pono* (faithfulness to a person, cause or belief) every day. You know I think, trying to do the right thing. And I think, it seems that—I guess I feel that we—give a period of growing up—teens, twenties, thirties it seemed a little more adversarial around ... just in terms like government and private folks. I don't know, I feel like there's more recognition or just ....

Keola Sheehan:

Appreciation maybe?

Lia Sheehan:

People are trying to be more cooperative right. And sometimes I feel like we were the bad guys or the rich guys or whatever, but I think we feel that stewardship responsibility. We feel the *kuleana* (responsibility, right, privilege). We know it, we have it, you know not everybody ask us about it, but we live that so ... you know, the privilege and the responsibility ... that's with us for sure.

Keola Sheehan:

We're lucky to be here. We're doing our best.

Lia Sheehan:

I did hear it, the term, 'auamo *kuleana* ('auamo: pole or stick used for carrying burdens across the shoulders, *kuleana*: responsibility, right, privilege). I think that was from ... you carry it with you right. It's a part of your being every day.

While growing up, Aunty Naomi Yokotake and her *‘ohana* lived a pleasantly simple life *mahi‘ai* and also *mālama* the *‘āina* while preserving the culture and making a living in Hanalei. Taro pond fields were the original crops planted by her grandparents, and then her grandfather added rice and cucumbers.

My grandparents on my father’s side, the Yokotake grandparents were from the westside—from Waimea and from Makaweli. And ... my grandfather belonged to a family of 13 siblings, and he was a child of immigrants from Japan. He took to the land, they developed a *poi* (the Hawaiian staff of life, usually made from cooked taro corms) factory, known as Waimea Poi for many, many years—disbanded that just recently... well in the last ... 23 years. But—my grandfather moved to Hanalei to—cultivate taro ... the intention was to send it back to Waimea for the *poi*—the family business. But he eventually ... got into the *hui* (association, team) with all the farmers here in Hanalei, and strange as it may be ... all of the farmers ... most of the farmers that had large tracts of land and had large *lo‘i* [taro pond field] were all of Japanese descent. There were small Hawaiian farmers that were situated throughout Hanalei, but most of them were of Japanese descent.

That’s the one my grandfather chose ... that’s one of the best ones. And I used to overhear them talking—they used to be discussing which is the best and ... it was mostly in Japanese but—part pidgin, Hawaiian, Japanese and then—English mixed in all of that. So that was what they decided to raise and then they made a *hui* (team, club, association, company), and then they would sell to Haleiwa Poi was where the Hanalei taro farmers used to send their taro to. And then it came down to my dad, and he worked the farm for a little bit, and he decided that was too much hard work.

[Referring to growing rice.] Usually, during the summertime, I remember. They would have to thrush it and then dry it. ... I think when I just got there, they just got the combine, the machine to harvest, because before that, they used to have to cut yeah. So, you would have to dress in long sleeves and everything and go out and cut. But by the time I was born, I guess, they had machines that could go and harvest the rice and separate it—you didn’t have to thrush it. Another crop my grandfather rotated the *kalo* with was cucumbers.

The Sheehan *‘ohana* have planted fruit trees including *‘ulu* and avocado. The *‘ohana* have tried agro-forestry, shrimp cultivation, and tried teaching children how to *lawai‘a*, but there were different setbacks. The *‘ohana* does allow people to pick fruits and *lawai‘a*.

Keola Sheehan:

We have fruit trees and stuff like that.

Aunty Patsy Sheehan:

Avocados and we have a lot of *‘ulu* (breadfruit), and we’re trying to .... I’m on the board of National Tropical Botanical Gardens and they’re trying to do agro-forestry. Yeah so ... but things don’t do so well in the sand around here so.

Keola Sheehan:

We tried the shrimp. But it was like every effort was rewarded with a flood and it all washed away. It got a little defeating ... So we have made an attempt ... even the fishpond that was going to be the plan ... was to try and ... whether that’s ... you let school kids come or whatever right ... teach those guys how to throw net—let it be a resource, but between the liability and then it’s just ... every move seems to have been sort of, I don’t want to say undercut but meet a lot of resistance, whether it’s mother nature or the government or the permits or whatever right. So, it’s not very easy to do it—as commercial enough that you do it for money. You know, we grow our fruit, and we go pick it, we give it away, and we make orange juice—and we let people come and fish, take what they can  
....



## HOE WA‘A

The two canoe clubs in Hanalei are Nāmolo-kama O Hanalei Canoe Club and Hanalei Canoe Club; both Auntie Patsy and Keola Sheehan are involved with the canoe clubs. The canoe clubs paddle up and down the river (including along the river of the project area) when the waters are rough out at Hanalei Bay and when the ocean is calm, they paddle out from Hanalei Bay.

## HE‘E NALU AND STANDUP PADDLE BOARDING

Mitch ‘Ālapa tells a little about his business, Hawaiian Surfing Adventures, which operates at Hanalei Bay with a surf shop and spacious area where the surf boards and standup paddle boards are housed. Mitch has paddled up the river past the area of the project.

[So, when did you start your surf shop?] Twenty-eight years ago. I started off with four surfboards.

[Your school is more on the inside, right, before the reef?] Yeah, and if there are any brave souls in my school that wanna go out there and get a slap, I’m willing to take you out, and you can go out there and get a feel for it. But we surfed with the sharks the other day. The lifeguard tried to scold me, I go you guys know me out of mind, out of state, sharks to me are like a junkyard dog. So, I am trying to teach my people not to be scared of sharks because it is not in their intuition. But I still have to correct myself with the lifeguards because I don’t want to make them feel like I am shining them off, yeah. Got to keep the respect. So, they like that, you know. People come see me and they going to the beach wondering why I am going surfing, and they can’t. I go, see the lifeguard. Because I don’t want to be the one to tell them. Because there’s sharks, but I’m going in the water. So I go, go see the lifeguard. Because I’m responsible for all my students, not the lifeguard. The lifeguard for people. But I’m responsible for —

## HO‘OMANA KALIKIANO, ‘OLI, MELE, HULA, AND ‘ŌLELO HAWAI‘I

Auntie Naomi Yokotake was raised in the Kalikiano faith, at the Kalawina church, Wai‘oli Hui‘ia. Her maternal ‘ohana are well-known in the Hanalei area for their musical talents. Auntie is the church’s choir director as were her grandfather and mother before her. She has been a *kumu hula* and *kumu kula* for many years and has spent most of her life perpetuating the culture.

[Auntie, you know ‘ōlelo no ‘eau, any wise saying within your family?] I don’t know ... wise sayings, my mom used to always tell us, church first, because we always wanted to do other activities, right? And she would say, well you got to do your church work first before you can go and do this. So, we all would hurry up and do our things, and we always had ... well not always, but whenever we could, my mom would call us and say, okay time for ‘ohana. Yeah. So, we would do ‘ohana. So, you all sit around in the living area, and then she says, let’s sing this song. So, we sing the hymn, and then she says, okay everybody tells us about your day, and then you need to ... share a memory verse. So, we all do that. Of course, we rush because we like to do the easy ones first right before the other person .... (Chuckles.) ... steal your memory verse. But that’s what we remember most, to beat each other out. And then we would do a *pule* (prayer), and then we would sing, and then pau

We just had *hula* yesterday .... I practice at Wai‘oli Hui ‘Ia Church Hall. [You do ‘auana (modern Hawaiian dance) and *kahiko* (ancient Hawaiian dance)?] Yes. Both. I try to keep ... because that is the whole point of me being a teacher. I studied under a lot of people, but when I got involved with Auntie Hoakalei Kamau‘u, with the State Foundation on Cultural Arts ... she said I’m teaching you for free, but your *kūleana* is that you go out, and you teach what I taught you to as many as want to learn. So, I’m still doing that. (Chuckles.) So, I started off with *keiki* (children) ... I had a whole bunch of *keiki* ... then young adults, and then adults ... now I’m only stuck with adults.

[You guys do *ho'okupu* (ceremonial gift giving as a sign of respect and honor)?] Well ... this is where it gets *kine* of slippery and sticky ... I had a *kupuna* ... I not sure if you ... heard of Grandma Rachel Mahuiki? She was ... very well known in ... Christian circles. And I know when I was a young girl, my mom used to go to the *kūpuna* and they used to call it *makua*—they would study the Bible and they would pray, and they would have discussions, and this was one of ways for them to deal with conflict, and with ... all kinds of *pilikia* (trouble, problem) that might come up in the family or ... in the community. And so ... when I went into *hula* with Aunty Hoakalei, she wasn't really strict about doing all the previous protocols ... like a *kuahu* (altar) and doing all those other things. She just wanted us to learn the dances and the chants so we could go out and teach it to keep the *hula* line ... perpetuated and to keep it the same, traditional. People can do all these other ways, but this is the tradition that you always can come back to this—the simple, tried and true. So when they started saying, okay well, you got to get back and do your roots, and you got to do this, and you got to your *kuahu*, and you got to do your Lono (one of the major deity and/or venerated kupuna) and your Laka (goddess of hula and/or venerated kupuna)—that made me *kine* of *pū'iwa* (startled, frightened, surprised) little bit. And then knowing the history of the *hula* and what it was for ... it was to praise the deities ... to bring recognition to the royalty, and all that stuff, its *kine* of clashed, yeah so ... I had to have a long discussion ... I asked my mom, and she said ... why don't you go and ask Grandma Rachel. And I finally ... she didn't give me the answers ... I finally figured it out for myself, and I said, well ... I think the intention is what is important. You know? You can do the *hula*, you can do Christian *hula*, you can do your traditional *hula*, but your intention has to be such that it is not praising or ... lifting up the gods. And so, I finally come to that conclusion and I'm comfortable in doing what I'm doing right now. So, it's ... it was a really hard time for me when we were ... doing *kahiko* especially, but it was a way to ... show how ... things were at that time, because this is where all our history is located in all the *mele* (song) ... the *'oli* (chant) and the *hula*. But ... yeah so ... it's come full circle and ... dealt with it.

So, we were raised in the church. We were exposed to music at all times. Looking in retrospect, as I look back—you know it's *kine* of ... important that it was done that way because we would have lost complete touch with our roots and our language, especially .... And I was raised ... and we were raised during the time when it wasn't fashionable, it wasn't *pono* (correct, proper, moral) to speak Hawaiian ... or even ... practice your cultural practices ... So, it's really hard for me now because you get used to that ... the English speaking and it's so we're trying to regain that, and its *kine* (Hawaiian pidgin language meaning sort of or somewhat, and/or 'whatchamacallit') of like—a losing battle—because you always revert back to what you're most comfortable with.

But ... it's hard because you cannot practice it in the way it should be ... like our houses ... our homes is not set up that way, because the children, the grandchildren has not had that background. And it's wonderful that they started Pūnana Leo (Hawaiian language-based schools), and that more people are ... speaking the language and are being intense about keeping the culture alive and ... promoting it.

## KULEANA

Kamealoha Hanohano Pa-Smith stressed how he would like to have better access to revitalize the culture once practiced in and around the Hanalei River by restoring the *lo'i kalo* and *'auwai systems*, practice *hale* building, *lawai'a* and *kilo* the resources, and work with the State and community to find solutions with the *kilo* and *mālama* of the *hau* to find better solutions, especially when dealing with flooding.

You know FEMA (Federal Emergency Management Agency), right ... came with a huge grant ... family emergency ... I didn't compromise ... I did not compromise with what I said we were going to do. We didn't get funded because people didn't understand that part of it ... my heart was really sore, not because we didn't get the grant ... things like that happen ... But I was heartbroken because people did not understand that, that could have also opened up the issue of more access, so there

wouldn't be ... there is a little ... *kine* of issue about access in Hanalei, because you got all kinds of rich people and their of what constitutes access, is based on their ... Western laws—not on *kapu* (sacredness, privilege, forbidden), not on *ho'omana* (reverence), *'aikapu* (forbidden [things to] eat), not on *kaulana mahina* (lit., famous moon; observance of non-activities/activities for certain moon phases) ... those things we use to protect and manage the resources effectively all these years. Based on a set of rights that come from American which is not always 100% sure it is appropriate for situations like this. So, this is another way to add a little importance and credibility that is specific to the Hanalei area. This is the first time, I never seen or heard of a Hawaiian consultant—honest, I never heard this is the first time ... so this is different, important and historical.

So, whatever curriculum that I have developed, that is a direct proportion to the answers we have found ... you know what I'm saying? We have only uncovered through some of the work we have done to try to re-establish our presence in the Hanalei area. We do not have as much access as we should to really show. But by you coming out and interviewing us, it is just a matter of a very short amount of time we will be able to piece together what the history of the area was in terms of cultural practices. And I think there are some things in the Section 106 process that could be valuable. But the Section 106 process in my opinion wasn't done ... I am not criticizing the authors of the process, but I don't think anybody thought that the whole idea ... I mean that it's sort of revolving into a process of which we can finally re-establish. It's not our fault we don't have access to many of these places. But as long as the rivers flow, if those words exist, as to specific ... time detecting things they would use in re-establishing *lo'i kalo* or re-establishing ... the *'auwai* system (canal, ditch), those kinds of things. It's only a matter of time before we can help to reverse the process of gentrification ... in the Hanalei area—even as built up as it is. And it is built up ... So, for me, I look forward to that.

[Do you know anybody who does any *hale* (house, building; referring to traditional grass huts) building in the area?] The issue of access comes in because we don't have a place to do work ... I do know now that DLNR (Department of Land and Natural Resources) has land in and around where Fish and Wildlife Refuge is. So, I'm going to go there and I'm going to see if I can get that *'āina* over there and see if we can lease it from DLNR. But *hale* building, it's on the comeback ... so, before I say that ... It was Uncle Mike's vision for us to be able to practice some of that down by the boat yard, right. So, he had envisioned the boat yard to be used to do these kinds of cultural practices, right. Once again, it's the issue of access or lack thereof. People ask the questions, why would you want to build a *hale*? It's *kine* of depressing actually ... I'm really glad, you're here doing this ... It's *kine* of depressing because ... we don't have regular access. You are bringing up all this stuff, and I feel a little bit embarrassed because ....

I think the key also is—it's very interesting to me is the amount of *hau* (a low land tree [*Hibiscus tiliaceus*]) bush that there is. The *hau* bush that's on the Hanalei River, it's important for Hawaiian people to be involved in the process of taking out the *hau* bush. You know why? It's because the *hau* bush is a uniquely native plant, so when we care for it, it's like we are caring for our *kupuna*, but we have to take it out because there is an imminent danger area .... So, it's up to us as Hawaiians to be able to push for us to be involved in it. It's not just taking out the plants out ....

You know, just removed the *hau* bush. No, it's how to better take care—it's such a big part, and it's our fault we let the *hau* bush get out of control. And it's our fault we didn't pay attention to the signs and the changing climate. And it's all right there, I mean there is a lot of different *mo'olelo* I think—that talked about climate change ... maybe they didn't used that word, but the change in climates ... for sure there are those words. I can't even compare ... the amount of 10-year floods that we've had in the past few years, and the amount of 100-year floods we've had in a few years. And then it's already off ... so I think the other value in your study, of course is place names ... Hanalei is a place that is rich—but I don't know all of them. I'm not ashamed but, I don't know as much.

Kamealoha expressed the need for the Hawaiian voices to be present and heard in meetings regarding Hanalei River.

Yeah, we don't have access and no way to participate and show the wisdom of our ancestors with regards to how we might contribute to some of the things that's going on. I'm trying to ... I don't know how to do this politically correct ... but the truth of the matter is ... if we're saying that the floods impacted the roads and all this other kind of stuff, surely it impacted something Hawaiian ... some taro patches or some places where Hawaiians used to go to enter into the areas so they could catch 'ōpae (shrimp) or to catch 'o'opu (fishes included in the families Eleotridae, Gobiidae, and Blennidae) whatever the case is. So ... re-establishing those points or access points, I think are really important. I think once you can re-establish access points, and once you can re-establish that it's okay for people to go in there and do their stuff it will be better. [So, there are not any piers going up or down so people can access the river?] Mmm ... mmm. There's not, there are some places ... That's why I was telling you about the place DLNR has a little bit *mauka* (towards the mountain, inland), it's still in the valley, and it's just right above the ... Fish and Wildlife area. So, I'm hoping that we can, if we were to ... establish the Hanalei River Heritage Foundation an area, then we would have a base that's right on the river. It's important for us to have a voice. Currently, I don't think we have one, to be honest—at least not a very strong one, but if it is a voice, a *kine* of political one. But for the visitor industry, all of it are all not Hawaiians. When HTA (Hawai'i Tourism Authority) came over to her to do a presentation, they had the meeting in Princeville. How much more obvious can you be that you did not come to any Hawaiian neighborhoods ... or any neighborhoods where any people who work in the visitor industry ... but you had to come to the richest place probably in all of Hawai'i and ask people for their opinion. Well of course, their opinion if tainted because they think that Hawaiians are happy at just being slaves, not slaves but ... being the happy workers ... the landscapers ... the valets, or whatever the case is. So, that's what the people's expectation of us are ... So, when you have a meeting like that where HTA sponsors, and all the experts are not Hawaiian, they don't know anything about Hawaiian language or cultural practices—the experts—okay, right on. So, a process like this could help us change that.

Mitch conveyed his concerns about the commercial boats and helicopters frequenting the area.

Even like all the boats that's going down, that's all of Mitchell Boy's friends, my son, they all surf together. So, they found a part in my heart—I can't be how I used to be. But I still do not like all those boats taking people down there and dropping them off, and instead of walking the trail first to get your blood, your mana (spiritual power) in the land, instead of cheating going on the boat. Just like the helicopters, I don't like the helicopters they desecrate the land back there, fly in and out of those valleys, and the old folks that live back there and died ....

Aunty Naomi Yokotake voiced concern about people coming into Hanalei and other parts of the north side of Kaua'i with new influences and locals getting pushed out, and the disappearance of old communities.

You look around and see all the influences of outsiders taking over here in Hanalei .... You can never see a local. .... And I look back and see all these local houses that were once—housing families that lived and worked in Hanalei or in the area ... People who went to school together ... we walked to school because ... we were living in the community.... Those people are all gone, their houses have been sold, their children are not interested in coming back .... So, it's *kine* of difficult to see it going. .... Yeah. So, I ... live out in the Hā'ena and I like it out there, because it's quieter ... it's more open, but it's still getting to be crowded ... like here.

Aunty Patsy Sheehan expressed concern about having only one road in and out of Hanalei, especially trying to get in and out of Hanalei when it is flooding, and the balance of man and nature.

Truly, you try to be a good steward and you ... it's a balance between nature and man. And there is so many people and they don't understand the .... I mean people, you are cutting something in your yard, and they say, oh cannot cut that native plant. Not native guy. Just keeping it out of the landscape is a big thing. The *hau* is forever will be growing and you know if we are going to keep this river and not kill the reef, we better fix the river ... get it so that it flows, so it opens, so that the

water goes out. Because it is all connecting, you cannot do this and expect that ... it's all connected. And I don't think that the powers that be, get it. Same thing, if you fix a road, the problem is, if we have a disaster of some kind, we need to get out of town, and there is so many people who don't work where they live, and live where they work, they have to come in and get the dog and the kid, and they want to get in that bridge, and we need to get out that bridge. And that's not even the visitor.

Maybe it's time to have an alternate road out. Just like Kīlauea. Alternate road out—the road now is a second road, there was another road. So, if we can go to the moon, we can make another road out of Hanalei. And you may have to add on to the bridge and make a second walking path until it's an emergency exit, and the cars are only going one way, and they get out, so people can come in .... Too bad for the visitor, it's the local person who is working so hard wherever and they have to come in and get their stuff. That's my concern is that you got to balance man and nature.

## DATA ANALYSIS AND CONCLUSION

This section examines background for the ethnohistorical and cultural context of the study area in Section II and the ethnographic data review and analysis in Section IV and presents an analysis of the potential affect that the acquisition of the two parcels will have on the native Hawaiian customary and traditional practices. The primary results of the analysis are that the locations of the beliefs, traditional customs and cultural practices (*kilo*, *lawai'a*, *mālama 'ia*, *mālama 'āina*, *mahi'ai*, *hoe wa'a*, *he'e nalu*, standup paddle boarding, *ho'omana Kalikiano*, *'oli*, *mele*, *hula*, and *'ōlelo Hawai'i*) were discussed with the consultants. The traditional customs and cultural practices mentioned are not located within the two parcels Tax Map Key (TMK) numbers (4) 5-4-004:999 and (4) 5-4-004:30. Therefore, it is important to acknowledge that the proposed streambank stabilization project of the two subject parcels does not directly affect or disrupt the native Hawaiian customary and traditional practices discussed by the consultants shown in Figure 7 and Table 3. However, if the proposed project disrupts use of the river in the working area, it could have an effect on the *lawai'a*, *hoe wa'a*, and standup paddle boarding activities as expressed in the Themes section of this report and cut off *mauka* to *makai* travel up and down the Hanalei River. The positive nature of this project is the safety of travel on the roads after streambank restoration.

Although *iwi kūpuna* was not indicated by the consultants to exist in the two parcels, it is uncertain whether *iwi kūpuna* will be found during any ground disturbing activities that may occur.

## V. RECOMMENDATIONS

The responses provided by the cultural consultants regarding the proposed Hanalei River streambank stabilization (along Kūhiō Highway [State Route 560] at mile post 1.7, TMK [4] 5-4-004:999 and TMK [4] 5-4-004:30), emphasize the fundamental concern most of them have for the welfare of the Hanalei River, streambanks, and roads in and out of Hanalei, especially when flooding occurs. The general stewardship of the entire Hanalei area is within the interest and concern of all the consultants. *Iwi kūpuna* were found to exist in Hanalei by the Sheehan 'ohana. Over the years the influx of tourists and fewer *kama'āina* 'ohana living in the area has been a struggle for all of the consultants.

Kamealoha Hanohano Pa-Smith, who represents Hanalei River Heritage Foundation, stressed how he would like access to revitalize the culture once practiced in and around the Hanalei River by restoring the *lo'i kalo* and 'auwai systems, practice *hale* building, *lawai'a* and *kilo* to *mālama* the resources, and work with the State and community to find better solutions with *kilo* and *mālama* of the *hau*, especially when dealing with flooding. The Sheehan 'ohana, who represent Hanalei Land Company, are concerned with the roads and routes to get in and out of Hanalei, especially during emergency flooding. Most of the local people who need to get in and out of the valley to get other family members evacuated do not work in the valley, and the road options are minimal. *Iwi kūpuna*, or bones [of the] ancestors, were also reputedly found around the Kānoa Pond area and different properties of Hanalei, but none have been reported in the study area and therefore will not be effected by the proposed work at the two parcels.

To address these concerns, the cultural informants recommend that the State of Hawai'i take the following actions:

1. *Kōkua* to *mālama* and *kilo* the resources and *hau* adjacent to Kūhiō Highway to perpetuate the culture and *mālama* the resources and well-being of the Hanalei River. These commitments will only apply within the HDOT's jurisdiction (the Kūhiō Highway right-of-way).
2. Work with the community to find solutions if the proposed project disrupts the use of the Hanalei River.
3. Support consultation with *kanaka* who are willing to work with the State, such as the Sheehan 'ohana, to find solutions to Hanalei's active issues, including flooding and alternative routes to and from Hanalei.
4. Enlist an archaeological monitor and a cultural monitor to observe all ground-disturbing project work to minimize potential impacts to cultural resources such as *iwi kūpuna*. If cultural resources are found during project work, a plan will be developed to protect these resources in consultation with cultural stakeholders/organizations and appropriate government agencies.





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## GLOSSARY OF HAWAIIAN WORDS

Hawaiian Spelling*	Definition
‘a‘ama	(black crab ( <i>Grapsus grapsus tenuicrustatus</i> ))
‘ahi	yellow fin tuna ( <i>Thunnus albacares</i> )
āholehole	Hawaiian flag tail ( <i>Kuhlia sandvicensis</i> )
ahupua‘a	land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (ahu) of stones surmounted by an image of a pig (pua‘a), or because a pig or other tribute was laid on the altar as tax to the chief
‘aikapu	to ‘ai (eat) according to the restrictions of the kapu (forbidden)
‘āina	land, ground
‘āina kalo	kalo land
‘āina ‘ohana	family land
Akua/akua	God, the Father; deity
akule	big or goggle-eyed scad fish ( <i>Trachurops crumenophthalmus</i> )
ali‘i	chief, chiefess, officer, ruler, monarch, peer, headman, noble, aristocrat, king, queen, commander
ali‘i nui/Ali‘i Nui	high chief
aloha	love, affection, kindness, compassion
aloha ‘āina	love [for] land
‘ama‘ama	medium growth stage mullet ( <i>Mugil cephalus</i> )
‘Amelika	America
‘anā‘anā or kahuna ‘anā‘anā	sorcery, sorcerer
āpana/apana	land parcel, lot district, sector
‘auana	modern hula or Hawaiian dance
aumākua	guardian ancestors
‘auwai	ditch, canal
‘awa	ceremonial and medicinal plant also called <i>kava</i> ( <i>Piper methysticum</i> )
awaawa/awāwa	valley, gulch, ravine
‘aweoweo	various Hawaiian species of <i>Priacanthus</i> , red fishes, sometimes called bigeye.
e kala mai	excuse me
haku ‘āina	land holder under the chief who manages the land and the people
hala	pandanus ( <i>Pandanus sp.</i> , <i>Pandanus odoratissimus</i> )
halalū	young growth of the akule ( <i>Trachurops crumenophthalmus</i> )

Hawaiian Spelling*	Definition
hālau	meeting house, long house; school of hula or hula group
hālau hula	school of hula or hula group
hale	traditional style grass house, house, building
Hāloa	the long stem and poetic name for long taro; name of man whose origin comes from the taro plant (son of Ho‘ohoku-ka-lani and Wākea)
hana	work, task, action, deed; practice; procedure
hanohano	glorious, magnificent
hana maika‘i	good work, good works
Ha‘ole	Caucasian, foreigner
hau	a wetland tree ( <i>Hibiscus tiliaceus</i> )
Hau-ka‘e‘e-o-Hanalei iki	name of a gentle breeze just above the river mouth at Hanalei iki; “dried up dews of Hanalei ‘iki”
Hau-mu	name of one of the three life-giving winds; “silent dew”
Hau-ōma‘o	name of one of the three life-giving winds; “green dew”
Hehu-pua-hala	name of a rain that sound like “stepping upon pandanus flowers”
heiau	temple, shrine
he‘e	octopus
he‘e nalu	surfing, surfer
hīhīwai/wī	Mollusks; endemic grainy snail ( <i>Neritina graposa</i> )
hoa‘āina	common people of the land, native tenants
hō‘ailona	sign, omen, symbol, representation
hoe wa‘a	canoe paddling; canoe paddler
ho‘okupu	ceremonial gift giving as a sign of respect and honor
ho‘omana	reverence; religion
ho‘omana Kalikiano	Christian religion
ho‘olei	to cast or throw as a net
hui	team, club, association, company
huki	pull
hukilau	a fishing practice using a seine net by several to many people pulling the net
hula	Hawaiian dance; hula dancer
i‘a	fish or any marine animal
iholena	a favored and common native variety of banana, eaten raw or cooked
‘ike	recognize, knowledge

Hawaiian Spelling*	Definition
‘ili/‘ili ‘āina	traditional land unit, a subdivision of an <i>ahupua‘a</i>
‘īlio	dog
imu	underground oven
‘inamona	a relish made of the roasted kernel of the kukui or candlenut mashed with salt
iwi	bone
iwi kūpuna	ancestral bones
Ka Pae ‘Āina O Hawai‘i	the Archipelago of Hawai‘i
ka po‘e kahiko	the ancient people
Ka-ua-hā‘oa	name of a “gentle rain”
Ka-ua-loku-o-Hanalei	name of a “the soaking rain of Hanalei”
kahakō	macron
kahawai	stream, river
kahiko	ancient; and sometimes in reference to ancient style hula or Hawaiian dance
kahu mālama	caretaker
kahuna	expert in any profession (male or female); priest; sorcerer; magician
kahuna nui	high priest
kai	sea
kākou	we inclusive three or more
kala	surgeon fish, unicorn fish (Teuthidae)
Kalawina	Calvinist, congregational
Kalikiano	Christian
kalo	taro ( <i>Colocasia esculenta</i> )
kama‘āina	native born; a person born in a place; acquainted.
kanaka	person, man
kaokao	syphllis
kaona	hidden or special meaning
kapa	traditional clothes or bedclothes made from wauke or māmaki bark
kapu	forbidden; sacred or taboo; special privilege or exemption from ordinary taboo
kaua	war, battle; army, war party
kauhale	building; house
kaulana mahina	lit., famous moon; observance of non-activities/activities for certain moon phases

Hawaiian Spelling*	Definition
keiki	child
ke‘ōmau	sustainability [keomau is a new word not found in the dictionary]
kī	ti plant ( <i>Cordyline terminalis</i> )
kia‘i	guardian, caretaker
ki‘i	war images, idols
kilo	observer, seer, stargazer, astrologer
koa	warrior, soldier, military; brave, bold, fearless
koa haole	a common roadside small tree ( <i>Leucaena leucocephala</i> )
kō‘ele	small land unit farmed by the tenants, usually maka‘āinana or commoners for the chief
kole	surgeonfish ( <i>Ctenochaetus strigosus</i> ),
kolohe	naughty, mischievous
konohiki	headman of the ahupua‘a under the chief
kuahu	altar
Kuhina Nui	powerful officer in the era of monarchy
kukui	candlenut tree ( <i>Aleurites moluccana</i> )
kula	field, pasture. “An Act of 1884 distinguished dry or kula land from wet or taro land.”
kūlanakauhale	town, village, city
kuleana	small piece of property, as within an ahupua‘a; right, privilege, responsibility; title, property, estate, portion, interest, claim, ownership
kumu hula	Hawaiian dance teacher
kumu kula	school teacher
kupuna/kūpuna (plural)	ancestor; elder
kū‘ula	any stone image to attract fish, whether tiny or enormous, and/or carved or natural
Kū-‘ula-o-‘Anini	name of a rain favored by fishermen; “red Kū of ‘Anini”
laiki	rice
lā‘au	plant
lā‘au lapa‘au	Hawaiian medicine usually using lā‘au or plants
lā‘au pālau	warclubs
laukapilili	“the quivering leaf”; part of a name for Hāloa-naka-laukapilili, son of Ho‘ohoku-ka-lani and Wākea
lāwalu	fish or meat wrapped in ti leaves for cooking
lawai‘a	fishing, fisherman

Hawaiian Spelling*	Definition
lehua/‘ōhia‘a lehua	lehua is the flower of the ‘ōhi‘a tree ( <i>Metrosideros macropus</i> , <i>M. collina</i> subsp. <i>polymorpha</i> )
lena/Lena	yellow: name of a rain that has a yellow tint as it falls in the sunshine
leo	voice
Līhau-o-Lanihuli	name of a wind which blow over the river or the sea encouraging fishermen to feel lucky; “gentle cool rain of Lanihuli”
limu	seaweed
limu kohu	small seaweed ( <i>Asparagopsis taxiformis</i> )
lo‘i	pondfield
lo‘i kalo	taro pond field; taro cultivation
lo‘i laiki	rice pond field; rice cultivation
loko	pond
loko i‘a	fish pond
lomi	massage, knead, press, squeeze
lomi ‘ō‘io	lady fish or bonefish made raw with pa‘akai, or/and round onions, or/and limu kohu, or/and ‘inamona
lū‘au	formerly a feast, party
Lū-hau-o-Hanalei-uka	Name of one of the three life giving winds; “scattered dews of upland Hanalei”
mahalo	thanks
mahalo nui loa	thank [you] very much
maha‘oi	brazen
mahele	portion, division, section; land division of 1848
mahi‘ai	farming, farmer
mahi‘ai lo‘i kalo	farm taro pondfield
ma‘i hilo	venereal disease, gonorrhea
ma‘i kukule	cholera
maika‘i	good, fine
maile	a fragrant native twining shrub ( <i>Alyxia olivaeformis</i> )
maka‘āinana	common people, commoner
mākāhā	sluice gate or egress from an enclosure
makai	towards the sea
makana	gift, donation, present
makua	parent; kūpuna who are religious figures in the church
māla/māla ‘ai	cultivated field, patch; garden; plantation

Hawaiian Spelling*	Definition
mālama	care for, preserve, protect, maintain
mālama ‘āina	caring [for the] land
mālama ‘ia	past tense of care for, cared for
māmaki	small native trees ( <i>Pipturus</i> spp.)
mana‘o	thought, belief
manauea	a small red seaweed ( <i>Gracilaria coronopifolia</i> )?
manini	convict tang, common surgeonfish ( <i>Acanthurus triostegus</i> )
mā‘ona	satisfied especially after eating
mauka	towards the mountain, inland
mea ‘ai	food
mea hīmeni	musician, singer
mele	song, anthem; chant of any kind; poetry
Menehune/Manahune	name of the legendary race of small people
moi	threadfish ( <i>Polydactyls sexfilis</i> )
moa	chicken
mō‘ī/Mō‘ī	king, sovereign, queen
moku	district; island
moi li‘i	small growth moi or threadfish ( <i>Polydactyls sexfilis</i> )
mokupuni	island
mo‘o	water spirit; lizard; narrow strip of land, smaller than an ‘ili
mookalo/mo‘o kalo	narrow strip of land used to grow kalo
mo‘okū‘auhau	genealogical succession; pedigree
mo‘olelo/mo‘o ‘ōlelo	story, history, tradition, literature
Mū/Mū ‘ai	Legendary people of Lā‘au-haele-mai, Kaua‘i, often called Mū‘ai, banana-eating Mū
muliwai	river, river mouth
na‘au	gut, mind, heart; feelings, mood
naka	quiver, quake, tremble, shake; part of a name for Hāloa-naka-laukapilili, son of Ho‘ohoku-ka-lani and Wākea
nehu	anchovy ( <i>Stolephorus purpureus</i> )
nenue/enenue	chub fish, rudder, or pilot fish ( <i>Kyphosus bigibbus</i> , <i>K. vaigiensis</i> )
noni	Indian mulberry ( <i>Morinda citrifolia</i> )
‘oama	young of <i>weke</i> (goatfish) or Mullidae
‘ohana	family, relative

Hawaiian Spelling*	Definition
‘ohana mo‘olelo	family stories
‘ōhi‘a	Two kinds of trees: ‘ōhi‘a ‘ai (mountain apple) and ‘ōhi‘a lehua (see lehua)
‘ohina	gathering, collections; selection
‘ohina limu	gather limu
‘ō‘io	ladyfish, bonefish ( <i>Albula vulpes</i> )
‘ōiwi	native Hawaiian
‘okana	district or subdistrict, usually comprising several ahupua‘a
‘okina	glottal stop
ola	life, health, well-being
‘ole	not, without, lacking, nothing, zero; referring to a Hawaiian practice of moon phases of when or when not to plant and ‘ole is a time of no planting
‘Ō-la-niu-o-Pu‘u Poa	name of a wind considered unlucky; “coconut leaf piercing wind of Pu‘u Poa”
‘ōlelo Hawai‘i	Hawaiian language
‘ōlelo no‘eau	wise saying, proverb, traditional saying
‘olena	Turmeric ( <i>Curcuma domestica</i> )
oli	chant that was not danced to
oli kaua	war chant
‘ono	delicious
‘o‘opu	goby fish; general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae
‘ōpae	shrimp
‘ōpae ‘ula	red shrimp
‘ōpala	trash, rubbish
‘ōpelu	mackerel scad ( <i>Decapterus pinnulatus</i> and <i>D. Maraudsi</i> )
‘opihi	limpet
palu	fish bait, chum
pa‘akai	salt
Pae-hahi-o-ka-iholena	name of a wind considered unlucky; “row of trampled <i>iholena</i> banana trees”
pā hale/pahale	house lot, yard, fence.
Pākē	Chinese
pākini	tin pan
pali	cliff, steep hill, precipice



Hawaiian Spelling*	Definition
pane	answer, reply, response
papahulihonua	the resources at the core of the earth
papahulilani	Resources above the ‘āina
Papakū Makawalu	the ability of our kūpuna to categorize and organize our natural world and all systems of existence in our universe; a concept derived from the Edith Kanaka‘ole Foundation ( <a href="https://edithkanakaolefoundation.org/papaku">https://edithkanakaolefoundation.org/papaku</a> Makawalu.php)
papa-nui-hānau-moku	the resources here on the āina and in the ocean
pāpio	young stage growth of the ulua or game fish
pī kai	accompany with salt for purification, after death, after a boy’s sub-incision, and other
pīkoi	a tripping club, as of wood or stone, with a rope attached
pilikia	problem, accident, trouble, affliction
pilina	connection, relationship
po‘e kū‘auhau	genealogy experts
po‘e	people
po‘e Ni‘ihau	Ni‘ihau people
po‘e o ka ‘āina	people of the land
poi	made usually from cooked taro corms, and is one of the main food staple in the Hawaiian diet
pono	Correct, proper, moral
pua‘a	pig
pū‘iwa	startled, frightened, surprised
pūlama	cherish, treasure, save; to care for
pule	prayer
pu‘u	hill, peak, cone
tūtū	grandfather, grandmother
‘uala	sweet potato
‘uwa‘u	petrel
uhu	parrot fish ( <i>Scarus perspicillatus</i> )
‘ula	red
‘ulāli‘i	measles; red spots of measles
‘ulī‘ulī	gourd rattle, with or without feathers
‘ulu	breadfruit ( <i>Artocarpus altilis</i> )
ulua	game fish; certain species of crevalle, jack, or pompano

Hawaiian Spelling*	Definition
waha	mouth
wahi	place, location
wahi pana	legendary or sacred places
wai	Water, liquid, fluid of any kind other than sea water
waiwai	walth, value, rich; goods; property; assets
wana	sea urchin ( <i>Diadema paucispinum</i> and <i>Echinothrix diadema</i> )
wānana	foresee, prophesy
wauke	paper mulberry ( <i>Broussonetia papyrifera</i> )
wāwae	foot, leg
wāwae‘iole	lit., rat foot is a tropical club moss [ <i>Lycopodium cernuum</i> ]
weke	certain species of the Mullidae, sumullets or goatfish
weke ‘ula	a species of <i>weke</i> ( <i>Mulloidichthys vanicolensis</i> ), kūmū or goatfish ( <i>Parupeneus porphyreus</i> )
welina	greeting of affection
welina kākoua	greetings everyone

\* Adapted from Mary K. Pukui and Samuel H. Elbert, 1986, *Hawaiian Dictionary*, University of Hawaii Press, Honolulu, unless otherwise noted.



## **APPENDIX A: CONSULTANT CONSENT FORMS**





## INTERNATIONAL ARCHAEOLOGY, LLC

July 5, 2024

**SUBJECT:** Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) in Support of a Project to Stabilize Erosion of the Hanalei River Bank Along Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30 [IA202122]

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a project by the State of Hawai'i Department of Transportation (HDOT) to stabilize erosion of the Hanalei River Bank adjacent to Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30. The project area is 300 feet (91.44 meters [m]) long and located south of Hanalei River approximately 0.4 miles (643.74 m) from the Kuhio Highway and Ohiki Road intersection.

The CIA will include semi-structured interviews with individuals from relevant Native Hawaiian Organizations and local communities to obtain ethnographic information about the project area and surrounding areas. This information will be used to assess the cultural landscape and potential impacts to cultural resources and practices that may result from project work. The interviews will be conducted by the study's Project Director, who will also conduct background historical research and analyze relevant historical and ethnographic data for the project area, and will be the primary author of the CIA. The study's Principal Investigator will edit the CIA and provide quality control.

Before the interview begins, the interviewer will ensure that the interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. As part of the informed consent procedure, the interviewer will review the points listed below with the interviewee and answer any questions the interviewee may have before signing this form.

- I, Patrick Solomon Kamealoha Hanahano Pa-Smith, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study will support a project by HDOT to stabilize the erosion of the Hanalei River Bank adjacent to Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30.
- I understand that participation in this study may involve sharing information about significant cultural areas in or near the project area, especially sites and their components along the Hanalei River.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by handwritten notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
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- I understand that, following my review and approval of my interview transcript, the Project

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HAWAII: 2081 Young Street, Honolulu, Hawai'i 96826 2231 - Tel: (808) 946-2548 - Fax: (808) 943-0716 - E-mail: HonoluluOffice@internationalarchaeologyllc.com  
GUAM: P.O. Box 22621, GMF, Guam 96921 - Tel/Fax: (871) 646-7552 - E-mail: GuamOffice@internationalarchaeologyllc.com

Director and Principal Investigator will analyze the interview results and extract information relevant to identifying potential cultural and natural features of significance. The results of this analysis will be included in the draft and final versions of the study.

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- I understand that digital copies of the interview recordings, interview transcript(s), annotated maps (if any), and signed consent forms will be archived by IA on its computer system in Honolulu, Hawai'i, for an indefinite period.
- I understand that I will not benefit directly from participating in this research.
- I understand that, though I may agree to participate in the study by signing this consent form, I have the right to withdraw my consent at any time during the interview(s), or refuse to answer questions without consequences of any kind.
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- I have had the purpose and nature of the study explained to me in person and in writing, and I have had the opportunity to ask questions about the study.
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Yes ☒ I am donating my interview(s) to IA for future use as stated above.

No ☐ Please use my interview(s) exclusively for the purposes of this study as described on this form.

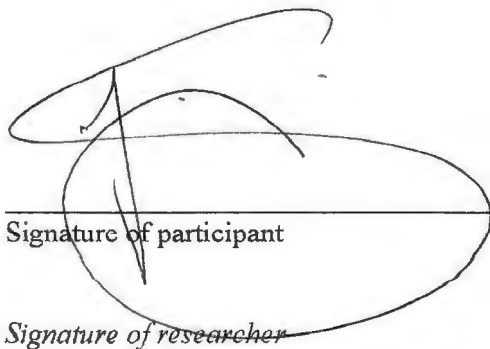
Project Director: Hannah Kaumakamanōkalanipō Anae, M.A. <[kanae@IAoceania.com](mailto:kanae@IAoceania.com)>

Principal Investigator: Robert A. Pacheco, M.A. <[rpacheco@IAoceania.com](mailto:rpacheco@IAoceania.com)>

*Signature of participant*

By my signature, I give consent for my interview(s) to be used as specified in this form.





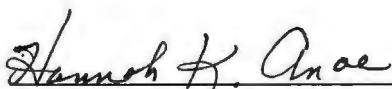
Signature of participant

7-11-24.

Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study



Signature of researcher

07.11.24

Date



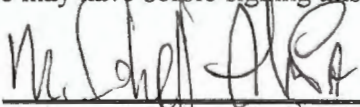
July 5, 2024

**SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) in Support of a Project to Stabilize Erosion of the Hanalei River Bank Along Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30 [IA202122]**

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a project by the State of Hawai'i Department of Transportation (HDOT) to stabilize erosion of the Hanalei River Bank adjacent to Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30. The project area is 300 feet (91.44 meters [m]) long and located south of Hanalei River approximately 0.4 miles (643.74 m) from the Kuhio Highway and Ohiki Road intersection.

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- I understand that I will not benefit directly from participating in this research.
- I understand that, though I may agree to participate in the study by signing this consent form, I have the right to withdraw my consent at any time during the interview(s), or refuse to answer questions without consequences of any kind.
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Yes   /   I am donating my interview(s) to IA for future use as stated above.

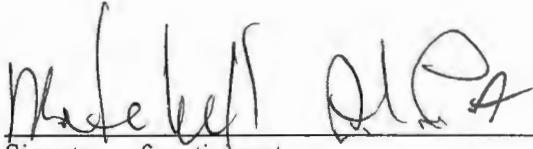
No        Please use my interview(s) exclusively for the purposes of this study as described on this form.

Project Director: Hannah Kaumakamanōkalanipō Anae, M.A. <[kanae@IAoceania.com](mailto:kanae@IAoceania.com)>

Principal Investigator: Robert A. Pacheco, M.A. <[rpacheco@IAoceania.com](mailto:rpacheco@IAoceania.com)>

*Signature of participant*

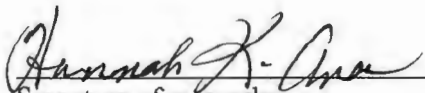
By my signature, I give consent for my interview(s) to be used as specified in this form.

  
\_\_\_\_\_  
Signature of participant

07.12.2024  
Date

*Signature of researcher*

I believe the participant is giving informed consent to participate in this study

  
\_\_\_\_\_  
Signature of researcher

07.12.2024  
Date





July 5, 2024

**SUBJECT:** Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) in Support of a Project to Stabilize Erosion of the Hanalei River Bank Along Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30 [IA202122]

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- I, Naomi L. Yokutake, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study will support a project by HDOT to stabilize the erosion of the Hanalei River Bank adjacent to Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30.
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Yes ☒ I am donating my interview(s) to IA for future use as stated above.

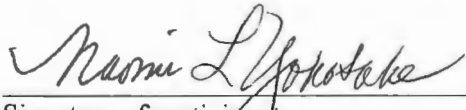
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Principal Investigator: Robert A. Pacheco, M.A. <[rpacheco@IAoceania.com](mailto:rpacheco@IAoceania.com)>

*Signature of participant*


By my signature, I give consent for my interview(s) to be used as specified in this form.

  
\_\_\_\_\_  
Signature of participant

07-12-2024  
Date

*Signature of researcher*

I believe the participant is giving informed consent to participate in this study

  
\_\_\_\_\_  
Signature of researcher

07-12-2024  
Date





July 5, 2024

**SUBJECT:** Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) in Support of a Project to Stabilize Erosion of the Hanalei River Bank Along Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30 [IA202122]

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- I, Keola & Patsy Sheehan, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study will support a project by HDOT to stabilize the erosion of the Hanalei River Bank adjacent to Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30.
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Yes WVS I am donating my interview(s) to IA for future use as stated above.

No \_\_\_\_\_ Please use my interview(s) exclusively for the purposes of this study as described on this form.

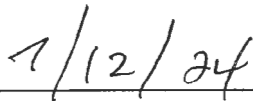
Project Director: Hannah Kaumakamanōkalanipō Anae, M.A. <[kanae@IAoceania.com](mailto:kanae@IAoceania.com)>

Principal Investigator: Robert A. Pacheco, M.A. <[rpacheco@IAoceania.com](mailto:rpacheco@IAoceania.com)>

*Signature of participant*

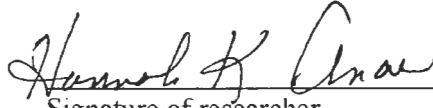
By my signature, I give consent for my interview(s) to be used as specified in this form.

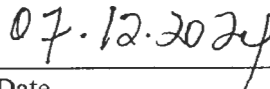
  
\_\_\_\_\_  
Signature of participant

  
\_\_\_\_\_  
Date

*Signature of researcher*

I believe the participant is giving informed consent to participate in this study

  
\_\_\_\_\_  
Signature of researcher

  
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Date



July 5, 2024

**SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) in Support of a Project to Stabilize Erosion of the Hanalei River Bank Along Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30 [IA202122]**

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- I, Juliette K. Sheehan, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study will support a project by HDOT to stabilize the erosion of the Hanalei River Bank adjacent to Kuhio Highway (State Route 560) at Mile Post 1.7, TMK (4) 5-4-004:999 and (4) 5-4-004:30.
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GUAM: P.O. Box 22621, GMF, Guam 96921 - Tel/Fax: (671) 646-7552 - E-mail: GuamOffice@internationalarchaeologyllc.com



used in the study.

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Yes ☐ I am donating my interview(s) to IA for future use as stated above.

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Project Director: Hannah Kaumakamanōkalanipō Anae, M.A. <[kanac@IAoceania.com](mailto:kanac@IAoceania.com)>  
Principal Investigator: Robert A. Pacheco, M.A. <[rpacheco@IAoceania.com](mailto:rpacheco@IAoceania.com)>

*Signature of participant*

By my signature, I give consent for my interview(s) to be used as specified in this form.

*Juliette K. Shuh*

Signature of participant

*9/3/24*

Date

*Signature of researcher*

I believe the participant is giving informed consent to participate in this study

Signature of researcher

Date





## **APPENDIX B: CONSULTANT TRANSCRIPTIONS**



## ORAL HISTORY INTERVIEW

With

Patrick Solomon Kamealoha Hanohano Pa-Smith [PSKS]

July 11, 2024

Princeville, Kauaʻi

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

The interview took place at a park in Princeville. The winds were strong, and people were at the park; therefore, there is some difficulty with sound and noise in the background.

Recording file name IA202122\_2024-07-11\_Patrick Solomon Kamealoha Hanohano Pa-Smith.MP3

HKA: *Welina kākou* (Greetings everyone),<sup>1</sup> today is July 11, 2024, we are on the *mokupuni* (island) of Kauaʻi, in the *moku* (district) of Haleleʻa, *kulanakauhale* [town] of Princeville. I am Kaumaka Anae representing International Archaeology, LLC (IA), and we are conducting a cultural assessment interview for the EKNA Department of Transportation (DOT) Hanalei Riverbank Stabilization project. And I am here with Kamealoha, and, Kamealoha, can you say your full name?

PSKS: So, my full name is Patrick Solomon Kamealoha and then my last name is Hanohano Pa-Smith.

HKA: *Mahalo nui* (Thank [you] very much) And ... do I have your permission to record this interview?

PSKS: Sure, *maikaʻi* (good).

HKA: And before we start, I would like to say ... *e kala mai*, (excuse me) if I seem so *mahaʻoi* (brazen), it is not my intentions, it's strictly for this interview.

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<sup>1</sup> Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (<https://wehewehe.org/gsd12.85/cgi-bin/hdict?l=en>). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

PSKS: No problem. Nothing to *maha 'oi* about trying to find out some history about the areas.

HKA: *Mahalo nui*. Let's begin our interview. So, what we are going to start off with is *mo 'okū 'auhau* (genealogy) and *pilina* or your connection 'āina (land) or your connection to place. Does your 'ohana (family) have genealogical connection to the area or 'āina 'ohana, family land.

PSKS: Are you talking about ... oh yeah. If you look on some of the old maps, some of the family names appear on there. So that would be Kamalenui and Titcomb. So, my great grandmother is a Titcomb, but her mother is a Kamalenui.

HKA: Where are these lands at?

PSKS: Right along the Hanalei River. There are some *kuleana* (right of property or land holding of the tenant residing in a land division) lands. I know they had a presence there, and I know in their genealogy my great-great grandfather, so my great-grandfather's father—he had 'āina right there on the river.

HKA: What was his name?

PSKS: His name was George Naoi Titcomb, George Rufus Naoi [Naoiokalaniula] Titcomb. I'm pretty sure, yeah ....

HKA: Is that your great-grandfather?

PSKS: Great-great grandfather—he's the son of Charles Titcomb ... and Charles Titcomb was from 'Amelika (America) right. And then my great-great-great grandmother who is ... Kamalenui—her last name ... Kanikele Kamalenui. She had other names too, but I don't remember .... And they were from here and—Kīlauea. If you go to Kīlauea, you will see all the names of the streets are named after family members.

HKA: Nice.

PSKS: Right, right, ... and then there's graveyard there, and another graveyard in Wainiha ....

HKA: And so where are they buried?

PSKS: I think my great-great grandfather folks—all of them, the Titcombs is buried at Kīlauea.

HKA: Kīlauea, nice ....

PSKS: Kīlauea, yeah.

HKA: Were any of your ancestors—*konihihi* (headman of an *ahupua'a* [land division usually extending from mountain to ocean])? *Ali'i* (chief) too but I always ask about *konihihi* because they were so close to the land.

PSKS: Right, right ... My great grandfather John Hanohano Pa was from Kalalau Valley. He was—certainly a *konohiki*. From what I remember .... In reading different *mo'olelo* (story) and listening to my own *kūpuna* (elders, ancestors)—he was born in Kalalau Valley, and I think—Kalihiwai, not too far from here ... a little more south ... is one of the places where they would take a lot of the kids and fish—I think he was raised as a fisherman in that area. And then in the Hanalei and Wainiha area I think that's where he learned to be a *mahi'ai* (farmer).

HKA: *Kalo* (taro [*Colocasia esculenta*])?

PSKS: *Kalo*.

HKA: Oh nice.

PSKS: For sure ... *kalo*. He was a—*kahu mālama* (caretaker) or *konohiki* I don't know exactly what title it was, but he was very, very knowledgeable about how to engage in *aloha 'āina* (love [of the] land) practices and *mālama 'āina* (care [for the] land) practices. He was very well informed—and he

was relied upon by many people of this area. My great grandfather probably lived till—in the '70s. A little after I was born, he passed away. I actually never ... I recollect ... I did meet him one time.

HKA: So Kalihiwai is not to far from here, I passed it. It's more towards the ocean, yeah?

PSKS: There is Kalihikai and Kalihiwai.

HKA: Oh yeah. So where was he, Kalihikai?

PSKS: Both places because I think down by the *muliwai* (river mouth) ... that's where I think they did open ocean fishing—pass there right.

HKA: And what kind of fishing? What kind of fish?

PSKS: I would think if you were in that area ... the *muliwai* ... I think what you would probably do was learn how to take care of those open ocean nurseries.

HKA: Like *ōpae* (shrimp) ... actually ....

PSKS: It would be more like *'ama 'ama*, (medium growth stage mullet [*Mugil cephalus*]), *āholehole* (young growth stage Hawaiian flag tail) ....

HKA: *'Ama 'ama*, *āholehole* ....

PSKS: Yeah, and I'm sure they also learned how to do *ho 'olei* (to cast or throw [net]) in that area or just a little outside where the reef areas were right. And I'm pretty sure Wainiha, they would pick *limu* (seaweed) all in that area and out here—I would think ... by Pu'u Poa, which is just on the Princeville side of the *muliwai* ... there is a beach area there. All in that area is heavy with reefs. So, I do know they used to go pick *'opihi* (limpets) for sure in these areas as well as down by Maha'i and then Wainiha.

HKA: And how about ... fishing by Hanalei Bay?

PSKS: Oh yeah. Um ... I'm not as familiar ... with the fishing practices of Hanalei Bay itself because let's just to be honest, right ... Hawaiian were ... you know, we weren't forbidden ... but it certainly wasn't—you know tourist, for visitors, for ... rich people. So ... gentrification—we stayed away from Hanalei—we went to other places to engage in cultural practices ... pick *limu* or pick 'opihi, and all those other kinds of stuff ... in these areas. Oh yeah, growing up it was like that.

HKA: What kind of *limu* you guys used to pick up?

PSKS: Well, I think it would be probably *limu kohu* (a soft, succulent, small seaweed [*Asparagopsis taxiformis*]) would be one of them. *Wāwae 'iole* (a cosmopolitan tropical club moss [*Lycopodium cernuum*]), I think would be another one. I'm trying to think ...

HKA: *Manauaea* (a small red seaweed [*Gracilaria coronopifolia*])?

PSKS: *Manauaea*, right ... from Hanalei, yeah.

HKA: That's where had *manauaea*, at Hanalei?

PSKS: I think there would have been, and the place I think you would have to go is on the other side of the bay—that is where the reefs are.

HKA: Hanalei, get 'ōpae or what over there?

PSKS: 'Ōpae 'ula (reddish shrimp). As far as 'ōpae is concerned, I would have to say, yes. The reason I venture to say yes is because when we used to exchange with our 'ohana, they would give us a lot of 'ōpae 'ula, and they used to dry it too. We got poi (pudding like food staple made from the taro corm) from the valley areas and 'ōpae ... we certainly got 'opihi from the sea.

HKA: You guys probably trade, yeah.



PSKS: Oh yeah. [Inaudible due to the winds]. There was *'opihi*, *limu*, and stuff we used to trade. We would go fishing in the Kapa'a area. Whatever we caught, or whenever we got *'ahi* (yellow fin tuna [*Thunnus albacares*]), *akule*, (Big-eye or goggle-eyed scad [*Trachurus curmenophthalmus*]) that kind stuff ... *halalū* (young stage *akule*) too. So, whatever we got from that side we would trade with the family from this side for sure. But it's been a long time, you know for us to be engaged in that on a regular basis. It's a lot more simplified because A, you don't have that many resources, and B, you been—they like to museum-ize Hawaiian places.

HKA: (Chuckles).

PSKS: Right? So, everything becomes a museum. What natives frolic ... frolic on the beach. So, there is an image what Hawaiians should—be or whatever. So, if we're doing it as a portrayal of an act or drama or something like that ... then it's all good. But to actual participate in a lot of these cultural practices ... I'm not saying that it's forbidden but it looks abnormal nowadays, because people don't see it on a normal basis like we used to see it growing up. So, I'm not quite 60, but I'm getting to 60. So, in my lifetime I can really see a change—from growing up till now. Even with a lot of celebrations that we had ... *paepae* (a fishing technique by bringing or casting a net to shore), fishing in the bay, Hanalei Bay ... all those kinds of things ....

HKA: Surround [referring to surrounding fish with a net], yeah?

PSKS: Right, most time you hear it now as *mo'olelo*, you don't actually see it. You know what I'm saying?

HKA: Yeah.

PSKS: You don't see it as often .... But we do know according to our ancestors told us and you know, the fact that the place has a lot of fish, and the specific kind of fish, and then now there is a lot of research to show the value of these places, especially a place like Hanalei in terms of the .... There is just massive research that everybody talks about sustainability ... *keomau*, that's what the word they are using now ... *keomau* ... that's probably a modern word but ....

HKA: *Ke-ola-mau*.

PSKS: No, not *ke-ola-mau*, *keomau*.

HKA: *Keomau*.

PSKS: Yeah, *keomau*. I know what you're saying *ke-ola-mau* or *e-ola-mau*, or whatever. But the word is *ke'ōmau* (a word not found in the Hawaiian dictionary) ... the *'okina* (glottal stop) and the *kahakō* (macron) above the o. And that is the word they're using or at least that is the word Kahuawaiola at Hilo is using for the word sustainability. To me, I find it fascinating current research that exists out there that talks about places on Kaua'i ... [11:14] inaudible due to wind [11:18] ... waterfalls and ... so to me that's the most exciting thing ... because there is a chapter in history that is missing ... absolutely, you know... And so, by us being down there doing our simple studies on the nurseries in Hanalei, or doing inventory ... because if you figure, if there is 190 ... resources you know, like plants ... animals ... insects ... if 190 were born in this area ....

HKA: Kaua'i is supposed to have one of the most biodiverse biotas of all the islands.

PSKS: Right. That's one thing ... there have to have been major *konohiki* (headman of a land division) in this area—simply because of that. So, I think, there is a few things that still remain—the winds, the rains, the flowing of water, the river itself, and the fishponds—Mo'omaika'i, Kānoa, and Kauikeōlani, right. The two ... Mahelona-Wilcox-Sheehan property right... All of those to me are ... Kamo'omaika'i which is on the Princeville side ... all of those to me are layers of history that is meant for us to study, and for us to reacquaint ourselves with.

HKA: Do you know about the LCA awards (Mahele 1848 land documents) for Hanalei? There are *choke* (many) names of *lo'i* (taro pond field).

PSKS: Right, right.

HKA: Choke names of *lo'i*, unreal. I documented a lot of them.

PSKS: Oh really, oh my gosh. Are you talking about ...?

HKA: The *lo'i* themselves in Hanalei.

PSKS: Are you talking about close by the *kahawai* (stream, river)?

HKA: I do not know exactly where they are at, but when I went to research, there were a lot of names. I probably can locate them on a map if I go to ... Kipuka (website created by OHA). I have the LCA (Land Commission Award), that's why.

PSKS: That's the OHA Database.

HKA: Yeah, if you go on Kipuka and put in the numbers in, you will probably find the place.

PSKS: Do you know ... that's why it's important .... So, whatever curriculum that I have developed, that is a direct proportion to the answers we have found ... you know what I'm saying? We have only uncovered through some of the work we have done to try to re-establish our presence in the Hanalei area. We do not have as much access as we should to really show. But by you coming out and interviewing us, it is just a matter of a very short amount of time we will be able to piece together what the history of the area was in terms of cultural practices. And I think there are some things in the Section 106 process that could be valuable. But the Section 106 process in my opinion wasn't done ... I am not criticizing the authors of the process, but I don't think anybody thought that the whole idea ... I mean that it's sort of revolving into a process of which we can finally re-establish. It's not our fault we don't have access to many of these places. But as long as the rivers flow, if those words exist, as to specific ... time detecting things they would use in re-establishing *lo'i kalo* or re-establishing ... the '*auwai* system (canal, ditch), those kinds of things. It's only a matter of time before we can help to reverse the process of gentrification ... in the Hanalei area—even as built up as it is. And it is built up ... So, for me, I look forward to that.

I think the key also is—it's very interesting to me is the amount of *hau* (a low land tree [*Hibiscus tiliaceus*]) bush that there is. The *hau* bush that's on the Hanalei River, it's important for Hawaiian people to be involved in the process of taking out the *hau* bush. You know why? It's because the *hau* bush is a uniquely native plant, so when we care for it, it's like we are caring for our *kupuna* (ancestor, elder), but we have to take it out because there is an imminent danger area .... So, it's up

to us as Hawaiians to be able to push for us to be involved in it. It's not just taking out the plants out ....

HKA: It's a good way for us to learn and put a model there in Hanalei but be put in other places as well.

PSKS: Kahana Valley.

HKA: Exactly.

PSKS: The Kahana Valley ... it's just my opinion, but the State is shortchanging the Hawaiian people. I think that they are missing the point. I think that they totally missed the point. You know, just removed the *hau* bush. No, it's how to better take care—it's such a big part, and it's our fault we let the *hau* bush get out of control. And it's our fault we didn't pay attention to the signs and the changing climate. And it's all right there, I mean there is a lot of different *mo'olelo* I think—that talked about climate change ... maybe they didn't used that word, but the change in climates ... for sure there are those words. I can't even compare ... the amount of 10-year floods that we've had in the past few years, and the amount of 100-year floods we've had in a few years. And then its already off ... so I think the other value in your study, of course, is place names ... Hanalei is a place that is rich—but I don't know all of them. I'm not ashamed but, I don't know as much.

HKA: This whole island is full of place names even on the West Side .... I looked at this map from I think, 1888. The Gay and Robinson map, have you seen that map—the Gay and Robinson map?

PSKS: I haven't seen their map, but I would love to see it.

HKA: Unreal.

PSKS: Is that the westside?

HKA: The Gay and Robinson has westside, but it expands ... comes to this side, eastside too.

PSKS: You're involved in archaeological work, right?

HKA: Yes, but this is not actually archaeology, it's ethnography but I do this too.

PSKS: Right, right, right. Well, let me just say this, yeah ... we can piece together history [18:39] inaudible due to wind [18:41] ... I was speaking to some of the other consultants that were doing other Ka Pa'akai [Analysis] and Section 106, my point to them was ... an archaeologist does good work but they only know so much, and it's only part ... but it's the words, as long as you keep those words alive and the names of the rains and the winds ... value [19:05] inaudible due to wind [19:08] ... I mean, we're asking *kine* (Hawaiian Pidgin language for sort of, somewhat, and/or "whatchamacallit") of [19:05] inaudible due to wind [19:14] .... Isn't it obvious, you look at the sun and it's in Ka-ua-loko ... So, what is Ka-ua-loko, is there a presence of that? So, at the top of Hanalei River, in the valley ... University of Hawai'i is monitoring climate change ... with instruments or whatever. So, my message to them is ... let us do a proper inventory of the different climate that were present in our *mo'olelo* back then. The thing that they wanted to do was outreach. It's fine, but I don't know if it will accomplish what they want to accomplish. So, I think the work that you are doing is really, really important. And I think if you can ...

HKA: Ka-ua-loko-o-Hanalei is the rain.

PSKS: Yeah Ka-ua-loko-o-Hanalei appears in a song, right.

HKA: Yeah. And then there's Hehi-pua-hale, stepping upon pandanus flower. The rain is associated with Po'okū, "erect head," a hill on the cliffs above the river, where used to have a large *heiau* (temple), yeah, over there?

PSKS: Right, right, right. Po'okū is on the left side ... that is on the other side. That is more like the Wai'oli side, yeah.

HKA: The plains were once covered with pandanus leaves, *lauhala* (pandanus leaf [*Pandanus odoratissimus*]). Lena is yellow.

PSKS: Right. Lenalena.

HKA: It's the yellow-tinted rain, suggests the phenomenon of rain falling in the sunshine, because it looks yellow ...

PSKS: Right, right. To bring the issues of the rains are really important. I remember Auntie Patsy; she asked me to—I don't know what I did with the paper ... I could send it to you. But I did an inventory of place names along the coastline. She asked me, and I sent it to her. Some places might be duplicates of what you already have. But I know the places were rich with names for sure along the coastline. And those names that you just mentioned, they are probably names of streams. [21:25] Inaudible due to wind [21:32].

HKA: I have a list of place names. I got the list of winds and rains too. I try to do some homework ....

PSKS: This is good for climate change. Did you check in the Ka Mo'olelo o Hi'iaka-i-ka-poli-o-Pele (The Story of Hi'iaka-i-ka-poli-o-Pele)?

HKA: I have *mo'olelo* from them.

PSKS: So that in there, is a complete inventory of rains that occur on the entire island of Kaua'i—that's a good resource too. The framework of using Papakū Makawalu<sup>2</sup> is very important. So, I don't know if we are supposed to point out specific ... *aloha 'āina* (love [for] land) is so broad. So, if you are asking me if there are practices, we are doing that our ancestors did—yeah, *aloha 'āina* and *mālama 'āina* (caring [for the] land), then for sure ....

HKA: Yes.

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<sup>2</sup> Papakū Makawalu: Edith Kanaka'ole Foundation. <https://edithkanakaolefoundation.org/papakuMakawalu.php>. "Papakū Makawalu is the ability of our *kūpuna* (ancestors, elders) to categorize and organize our natural world and all systems of existence in our universe."

PSKS: I've been using the Papakū Makawalu framework for us to better understand how we can update our traditional resource management practices.

HKA: Do you want to explain what is Papakū Makawalu?

PSKS: For me, Papakū Makawalu is the framework of how native Hawaiian people view different ecosystems, and how they view the universe through this study of native ecosystem and how it is divided into resources above us, *papa-huli-lani* ... *papa-nui-hānau-moku*, the resources here on land and in the ocean, and at the core of the earth which is *papa-huli-honua*. And based on that distinction, you can begin to understand also the cosmology, right ... in other words the spiritual practices, how the spiritual and cultural practices sort of intersect each other, and how each deity, *akua* (god), *aumākua* (guardian ancestors), *kahuna* (priests) and *kupua* (demigod, shape shifter) was responsible for specific energy associated with these three ecosystems. And by setting that framework, you can begin to understand that multi-layers of the relations and the human relations between man, nature, and the spiritual world in my opinion ... Anything, whatever we do ... whatever we do, *aloha 'āina*, it's an articulation of reverence that we have for our *kūpuna*, even if we may not know all of them right now—I mean the main ones we know ... Lono, Kū, Pele. But there's so many, and it's really important for a place like Hanalei, because you see the phenomena of flowing waters, and you see the phenomena of the fish—the '*ama 'ama* and some other fish in the area.

HKA: You guys see '*ama 'ama* up in the valley.

PSKS: You do. My friend Art Kapua'ona'ona, the ancient Hawaiian *braddah* ....

HKA: Yeah, I was trying to get ahold of him too.

PSKS: He's a little bit hard to get ahold of—everybody works so much that's why. But for sure, he is one who has been studying intimately with the movement of fish in Hanalei River. He's one I really trust, and the other is the Hariguchis. Even Uncle Mike ... he knows plenty as a result of being in Hanalei for as long as he has.



HKA: That's who I was hoping to get too ... Keola.

PSKS: Keola knows so much, he's a gift. He doesn't like to show off about it though. He knows a lot because he is the actual caretaker, he's the actual *kī'ai* (caretaker, guardian) for two very important fishpond, Kauikeaōlani and ... the Kānoa fishpond ... I'm just excited that I have the honor of being present ... and listening to what they have to say, people who are daily caretakers of precious resources. Kauikeaōlani is meant to facilitate food ... sustainability in the whole Hanalei area. So ... my hope is that this study will help us to reconnect ... to show the importance ... not get lost in this rush to try to deal with climate change ... and then brush over thinking that the Hawaiian stuff is nothing important. You know FEMA (Federal Emergency Management Agency), right ... came with a huge grant ... family emergency ... I didn't compromise ... I did not compromise with what I said we were going to do. We didn't get funded because people didn't understand that part of it ... my heart was really sore, not because we didn't get the grant ... things like that happen ... But I was heartbroken because people did not understand that, that could have also opened up the issue of more access, so there wouldn't be ... there is a little ... *kine* of issue about access in Hanalei, because you got all kinds of rich people, and for them what constitutes access is based on their ... Western laws—not on *kapu* (sacredness, privilege, forbidden), not on *ho'omana* (reverence), *'aikapu* (forbidden [things to] eat), not on *kaulana mahina* (lit., famous moon; observance of non-activities/activities for certain moon phases) ... those things we use to protect and manage the resources effectively all these years. Based on a set of rights that come from American which is not always 100% sure it is appropriate for situations like this. So, this is another way to add a little importance and credibility that is specific to the Hanalei area. This is the first time, I never seen or heard of a Hawaiian consultant—honest, I never heard, this is the first time—so this is different, important and historical.

HKA: I love it that we have an opportunity to do this type of work in our company.

PSKS: Yeah, because you can't ... I get it ... there needs to be an economy and stuff like that. But you know what ... the visitor industry should be grounded in Hawaiian culture; we owe it to the native people. They need to give back in ways that will help the native people, rather than forcing us to assimilate to a life that is not good for us. You know what I'm saying?

HKA: Yeah.

PSKS: I probably said too much anyway.

HKA: No. Does your family have any *mo'olelo*?

PSKS: Something specific about this area?

HKA: Yeah.

PSKS: Mostly about Wainiha, mostly in that area.

HKA: Give me one.

PSKS: The *mo'olelo* we are most familiar with is people learning how to interact with sharks, and with the *mo'o* (water spirit, lizard) in the caves. Under the water in the caves there are lava tubes that lead directly to the ocean as well as other parts in Kalalau Valley, and other parts of the Nā Pali Coast. So *kūpuna* was familiar with that and they could go through those lava tubes and in those caves—Maninihola and then that other cave that goes to Hā'ena side. They used to go through those caves, and I think those caves were dedicated to Kāne (one of the four major deities). They would go through those caves and somehow come out through the other side of the island.

HKA: Yeah, I heard about the *mo'o* over here.

PSKS: Right, right, right. The *mo'o* has these special powers. And the *mo'o* being ... well, I mean .... The *mo'o*, the one from Anahola ... the *mo'o* served a purpose, right? The purpose was, they were ... guardians of the resources of the area.

HKA: The water, they were water spirits, yeah.

PSKS: Right, right, right ... correct, that's correct. Those kinds of *mo'olelo* were shared with us for sure. Yeah. The presence of Pele being along here, on the coastline in a different form. And she interacted with her sister, Nā-maka-o-kaha'i and Hi'iaka-i-ka-poli-o-Pele ... trying to fight off the powers of

her sister who are more related to water—Nā-maka-o-kaha‘i. The winds that they talk about, to me, are like conversations. So, to me, those kinds of *mo‘olelo* were shared with us. Also, the presence of Pele in these areas ... for sure. Night marchers ... the presence of Menehune (a legendary race of small people), and the fact that a lot of people here on the North Shore, here still, who claim to be descendants of some family from the Menehune.

HKA: Yeah ... [31:04] inaudible due to wind [31:21] ... they were just a race ... I guess they were of regular stature, but they seem so small compared to the other people who were here.

PSKS: Right. But now they are taking more like a Leprechaun kind of a thing but ...

HKA: But I think both might exist.

PSKS: You are talking about *‘anā‘anā* (sorcery), right—the magical?

HKA: Get the Mū (legendary people from Lā‘auhaelemai, Kaua‘i).

PSKS: The people of Mū. Oh, yeah ... there are people who say that too here. So, what I have to say about that is I do believe they had special powers, but the powers that they had were based on their ability to *kilo* (observe, seer).

HKA: Yeah, to observe.

PSKS: To observe, so I think that their powers came from being so ... The people of Mū and the Menehune from what I understand, that they were so in tune with everything that was going on in nature—things that they could *hō‘ailona* (signs, omens) about, right, or the things *wānana* (foresee, prophesy) about ... and predict for the future based on their astute understanding of their resources. That’s what I know about the people of Mū, they did a lot of work at night. And they always talking about the Menehune being the ones responsible for...

HKA: The had Chief Ola ...

PSKS: Which one is that one?

HKA: Chief on the West Side, but he was on this side too.

PSKS: Right, right, right. You know what you could do, is it ‘Ōpūkahi?

HKA: ‘Ōpae ... there is a mo‘olelo with him and the ‘ōpae from this side ... something like that.

PSKS: Right, right, right. That I’ve heard but I’m not too familiar with that. Like I said ... I think that the past *mo‘olelo* from Hanalei is only as relevant as we ... as only as important and present as we make it. As I said earlier on, our understanding of our past is only proportional to things happening nowadays. So, I think, whatever we know, there is so much more obviously that needs to be covered, and that’s why the work that you are doing is really important.

HKA: What is your favorite ... ‘ōlelo no‘eau (Hawaiian proverb or saying)? Doesn’t have to be the one from Pūku‘i, can be in English too, doesn’t have to be in Hawaiian.

PSKS: Right, right, right. Oh, I know: *Mahalo i ka mea loa‘a, mahalo i ka mea loa‘a* ... I think it means resilience. I think it’s saying, we are here, and we have what we have but I think there is a *kaona* (hidden or special meaning) particularly. I don’t know if it is an ‘ōlelo no‘eau but we were always told that, right, eat what get, right? They said it in English ... Pidgin, right? Just be happy you get something; you know what I’m saying? I don’t think that was meant to say, we should be *mā‘ona* or satisfied with what we get. I think what they were saying is that this is what we have nowadays, but there is more—but there’s more and you just have to be resilient. I think that ‘ōlelo no‘eau or that phrase right there, is an expression of resilience and how we have to be aware there is more out there for us to learn ... To never be satisfied with what have. To know that you have to dig deeper, and you have to apply yourself more, and you have to be even much more resilient. You know what I’m saying? Because I know that we have at Wai‘oli under the nonprofit, it’s only one acre, but the amount of ....

HKA: That’s Happy Water, right?

PSKS: Wai‘oli?

HKA: Yeah.

PSKS: Wai‘oli, joyful. But here’s the thing ... who knew the presence of one Hawaiian, one acre of land ... could cause that much destruction ... because people know that once ... the dam has broken, so to speak. So, I think there is a real fear for people who may not understand that, I don’t know ... I think it’s okay to live with layers of history, different periods of history, and honor all of that ... you don’t have to be one or another. So, I do think that it’s time that you were here quite honestly. And I do think it is interesting with the people that are being interviewed right now, because could be real big game changers.

HKA: So, I hope it makes a difference. So ... what kind of Hawaiian practices ... like you said your *‘ohana* (family) did *lo ‘i kalo* (taro pond field) yeah?

PSKS: For sure, *lo ‘i kalo* ... *hula* (Hawaiian dance) ....

HKA: Where was that *lo ‘i kalo*?

PSKS: Wainiha.

HKA: Wainiha.

PSKS: Hanalei.

HKA: You know what kind of variety of *kalo* they planted?

PSKS: That’s a good one. It’s still there.

HKA: Plenty of them are *lehua* (variety of taro). Plenty of *lehua* I noticed Hanalei has. Plenty of *lehua* come out of here.

PSKS: Probably Wainiha too.

HKA: That's usually the favorite, yeah?

PSKS: Right, right, right. It's good for making *poi*, yeah.

HKA: I love the Hanalei *poi*.

PSKS: You know ... nowadays they are opening up *lo'i kalo* in Kapa'a and Wailua ... Kapa'a you can get pretty good ... *kalo* from there. But for sure *kalo* was one, and fishing was another one.

HKA: *Lawai'a* ... so what kinds of fish ... like mullet?

PSKS: I think was mostly reef fish. I think was mostly *limu*. I know for sure was '*opihi*.

HKA: Fishes ... like *weke* (certain species of Mullidae, surmullets or goatfish), *uhu* (parrot fish [*Scarus perspicillatus*]) ...

PSKS: *Uhu* for sure.

HKA: ... *kole* (Surgeonfish [*Ctenochaetus strigosus*]), '*aweoweo* (various Hawaiian species of Priacanthus, red fishes, sometimes called bigeye) ... *kala* (surgeonfish, unicorn fish, Teuthidae).

PSKS: *Kole* was for sure. '*Aweoweo* for sure. *Kala*, '*aweoweo* for sure. I was thinking about what else. For sure *manini* (convict tang, common surgeonfish [*Acanthurus triostegus*]).

HKA: Over here get sandy places, '*o'io* (ladyfish, bonefish [*Albula vulpes*]) they like the sand?

PSKS: Right, right, right. When you say sandy places, what do you mean?

HKA: Sandy bottom.

PSKS: Oh, sand bottom ... yeah, over here in Hanalei all have sand. Okay yeah, so that's why ... yeah, there would be 'ō'io there. right. Yeah, if that's what their environment is right, is a sand bottom.

HKA: Probably 'oama (young of the *weke* or goatfish) if get *weke* ....

PSKS: Right, right, because it's the baby *weke*.

HKA: *Weke* 'ula, (a species of *weke* [*Mulloidichthys vanicolensis*]), *kūmū* (goatfish [*Parupeneus porphyreus*]) like that, yeah?

PSKS: Right, right, right. Most of my ... the '*ike* (knowledge) that I know about fishing of course, comes from this area, but in terms of practical application of the '*ike*, is Anahola and Wailua ... those are the places. I've done a lot of different kind of studies on ....

HKA: Must get *moi* (Threadfish [*Polydactyls sexfilis*]), yeah?

PSKS: Oh my gosh ... yeah. *Moi* is really '*ono* (delicious).

HKA: I bet you get plenty of *moi*?

PSKS: Oh my gosh yeah. *Moi*, is my favorite, I love *moi*.

HKA: I love *moi*.

PSKS: I like it fried.

HKA: Oh, I love fried.

PSKS: Yeah ... that's my favorite fish.

HKA: I like it fried, and I don't mind steaming the big ones and putting the *lup cheong* (Chinese sausage) inside.

PSKS: Oh really, I just like it fried and I like to eat it with *poi* ... and tomatoes.

HKA: [39:25–39:30] Inaudible due to wind.

PSKS: Right, right, right ... A number of years ago, my friends in Hanalei had some ... and we fried 'em, and it was so *'ono*.

HKA: Did they have a *māla* too in your family?

PSKS: A *māla 'ai* (cultivated field)?

HKA: Yeah.

PSKS: Still get. A lot of my second cousins.

HKA: *'Uala* (sweet potato [Ipomea batatas])?

PSKS: Little more up you might find, in the little drier areas. So, wherever the *lo'i kalo* ... because intercropping right?

HKA: Yes.

PSKS: Intercropping, so you'll have your *kuahu* or ... ceremonial plants and your *lā'au* (Hawaiian medicinal) plants ... and your regular *mea 'ai* (food). So, I think that above the *kalo* patches ... that's where they grew the sweet potato ... *'uala* ....

HKA: [40:24] Inaudible due to wind [40:32]. You practice *lā'au* (Hawaiian medicine)?



PSKS: No.

HKA: You must practice some ... [40:38] inaudible due to wind [40:44] ... *pa‘akai* (salt) ....

PSKS: For sure ... *pa‘akai*. *‘Ōlena* (turmeric [*Curcuma domestica*]) ... there’s other concoctions ...

HKA: You guys have some *noni* (Indian mulberry [*Morinda citrifolia*]) up there?

PSKS: In Hanalei or ...?

HKA: Yeah, in Hanalei?

PSKS: Up in the valley ... I used to have a ... agreement with the state to *mālama* some of the *‘āina* up at .... When you get ... so with the *noni* and stuff like that ... on the ridges, I think that you’re gonna have. So, there would have to be some presence of water, and it would be intermixed with some of the plants in the area. But I did see.

HKA: I get *noni* going crazy where ... I take care ... tons of it.

PSKS: It’s *kine* of interesting because my *kūpuna* said *noni*, you don’t want to overuse it ... it’s toxic.

HKA: Yes, because of your liver ... you cannot overuse it ....

PSKS: So, it’s not like ... So, to me it’s *kine* of curious that they have people do the *noni* drinks or whatever the case is. I’m not too sure what that’s all about ... I’m not 100% convinced.

HKA: I’ll bite into a *noni* every now and then ....

PSKS: So that’s the only thing I know about the *noni*. I know that the *noni* is used for inflammation, but *‘ōlena* I can use for that too.

HKA: *‘Ōlena* is good too when you’re doing *pī kai* (accompany with salt for purification, after death, after a boy’s sub-incision, and other) ceremonies.

PSKS: *Pī kai* ceremonies, yeah.

HKA: Besides the *pa ‘akai*.

PSKS: *‘Awa* (ceremonial and medicinal plant also called *kava* [*Piper methysticum*]), I remember us getting *‘awa* from Wainiha and then from the Hanalei area for sure.

HKA: What kind of *‘awa*, what kind type?

PSKS: Oh shucks ...

HKA: The *‘awa* is just like the *kalo* you know, they get *moi* ... they get Hanakapi‘ai ... they get ... Mahakea. Mahakea is really good.

PSKS: Right, right, right. I’m not too sure what the variety was ... I was getting our stash of *‘awa* growing from the family on this side, for sure.

HKA: Yeah. Get *hiwa* (variety of *‘awa*).

PSKS: Is the name of another ... see, I didn’t know that. Since I been in the immersion schools ... not because it’s immersion school, doesn’t mean they know everything, right? But they know a lot, though. But they are starting to bring back some of those practices when I was teaching at Keaukaha at Ka ‘Umeke Kā‘eo.

HKA: Big Island?

PSKS: Yeah, yeah, yeah. I was at that school for a while.

HKA: Oh, nice.

PSKS: Yeah, it's a good school, so smart .... Yeah ... Keaukaha ....

HKA: Yeah, and really good community over there.

PSKS: Yeah, I was really impressed ... how strong the community and how supportive they were, Hawaiian immersion ... and the number of speakers that they have in Hilo, that was pretty amazing. Even here you know, we have a fair share amount ... but people are a little shy. But we do have a fair share of Hawaiian language speakers.

HKA: Oh yes.

PSKS: I'm surprised how much people speak Hawaiian.

HKA: Down the westside, they got plenty.

PSKS: Yeah, *po'e Ni'ihau* (Ni'ihau people) ... On this side too ... it's *kine* of surprising but yeah. You be surprised people in the store talking ... I never knew that. Down over here get families.

HKA: What are some Hawaiian conservation practices you guys do? That you do or ... done in Hanalei?

PSKS: Hanalei, if we talking about practices and stuff, of course, the idea of *kilo* is important, and any of those practices that has to do with *kilo* ... fishing, *kilo* that has to do with the moving of tides, *kilo* that has to do with the weather patterns ... so anything to do with *kilo* I think is still quite strong here on this side of the island.

HKA: How about conservation practices?

PSKS: When you say conservation practices, we are talking about *mālama 'āina*, right?

HKA: Yeah, *mālama* 'āina and ... they [Hawaiians] do things seasonal, yeah? You're not going to pick up *wana* (sea urchin [*Diadema paucipinum* and *Echinothrix diadema*]) anytime, because when you pick the *wana* ... not going even have enough *wana* ....

PSKS: Yeah, if you pick it up the wrong time.

HKA: You got to look at the *hala* (pandanus [*Pandanus odoratissimus*]), you look at the ....

PSKS: Other *hō* 'ailona ...

HKA: Yeah.

PSKS: I would say, for us it's about re-establishing these practices, especially in this area, right. We started by spending a lot of time on the *muliwai* and seeing what kinds of fish are there. We did focus on the 'ama'ama. So ... if you talk about that as a conservation method ... that for sure. We also looked at the *hau* bush as a conservation practice to see how we can better manage the *hau* bush so we can work to mitigate. And then we did ... you didn't see it yet, all the transplanting ... when you see Aunty Patsy folks ... all of the transplanting, we did all of that.

HKA: What did you guys transplant?

PSKS: We wanted to take out the *hau* bushes right, so we needed to stabilize the stream bank, and so all the initial work was done by us and mostly done by hand.

HKA: What did you have to do, take the *hau* bush out by hand?

PSKS: We took out the *hau* bush with a small, small excavator, and most of it was done by hand machete, and some power tools.

HKA: All along the banks of the Hanalei River?

PSKS: Along the banks of the Hanalei River.

HKA: How long were you doing that?

PSKS: Oh geez, we did that for about a year. We wanted to continue ....

HKA: When did you guys do this?

PSKS: 2020 ... 2022, in that timeframe. We started planning a long time ago but ... we wanted to probe at planting native plants ... *kalo* ... people donated that, ti leaf .... There were also some non-invasive grasses that were in there that we thought would be compatible with stabilizing the ... When we chipped all of the *hau* bush ... we spread all the *hau* bush on the bank itself ... to stabilize ... that acted like compose, and then we planted some Hawaiian plant there, that was done by Aunty Patsy. But most of it was done by us, and then ....

HKA: He sounds like a stream restoration project.

PSKS: It was yeah. And the water, because never had any irrigation or stuff like that, we literally had to walk ....

HKA: And put water in?

PSKS: Yeah, had to bring the water out of the river and then put it onto the plants itself or go ....

HKA: When was this?

PSKS: Aunty Patsy's land.

HKA: No, when?

PSKS: Between 2020–2022.

HKA: Did you guys have any flooding during that time?

PSKS: We did, that's why we started ... We're trying to be an example ... *Hana me ka 'ike*, *'a'ole me ka waha* (work with the knowledge, not with the mouth) ... So, there is a lot of *waha* (mouth) ... I was a volunteer at that point too. There were other things I was getting paid for but ... We weren't able to convince people that the work was important enough right. We did it with the combination of nonprofit funds, Uncle Mike [Sheehan] put in some, Keola, and Aunt Patsy guys put in some, and then we did a lot of volunteer work. But we wanted to show people that if we did things you know, *Hana me ka lima* (work with the hands), *lima lalo* (hands down) ... right. So, we trying to show and demonstrate, and we were very sensitive to the time of the days that we did this—during the time of the day our ancestors would, we were very cognizant of planting to make sure we didn't plant on the *'ole* (referring to a Hawaiian practice of moon phases of when or when not to plant and *'ole* is a time of no planting), moons and things like that ....

HKA: Yes.

PSKS: So, yeah, the whole project was based on us trying to replicate or think of what our ancestors would have done. So to our credit ... we did do that. Money talks and so ... the people with the bigger machines, and the people ... who are politically connected, are closer to whoever makes the decisions—inevitably, they won out.

HKA: Is that the reason why you guys stopped doing that?

PSKS: The reason why we stopped doing that we didn't have any money ... 2022 is when we stopped, yeah. We wanted to continue.

HKA: How is it going ... how does it look right now?

PSKS: It looks good on the Sheehan side, on the Hanalei side ....

HKA: Nice.

PSKS: It's really nice, you should go down check it out. I'm sure Auntie Patsy guys would take you over there ... What was really interesting ... literally we had to go inside the river, and literally we had to ... be resilient and resourceful in what we did so that we could make sure we were honoring ... to the best of our ability ....

HKA: It's hard work.

PSKS: Oh yeah ... I love doing that kind of work. I love it, I really do. I'm excited to get another chance to do something like that .... Thank you for the names of the *lo'i*. I'm aware ... that before they used to have specific names.

HKA: I'll send some information to you ....

PSKS: I really appreciate that.

HKA: Does anybody go Samoan crabbing, mud crabbing ... in the Hanalei River?

PSKS: They do.

HKA: And is there a lot? Is there big kind?

PSKS: Yeah, I heard they get. I mean all the rivers here are like that, everybody goes.

HKA: Yeah.

PSKS: Yeah, yeah, they do.

HKA: Have you ever seen crab?

PSKS: Yeah.

HKA: How big?

PSKS: I don't remember, but I see some that are really sizable. Get plenty, who my gosh.

HKA: I love that.

[52:38–52:53] Redacted: interview paused while PSKS settles his dog down.

HKA: So, you know anybody who dives for *he'e* (Octopus [*Polypus* sp.]?)? Like around here or Hanalei by the bay?

PSKS: Yeah, you know I think tomorrow when you go speak to the Haraguchis and you go speak to ....

HKA: They not going come ... Uncle Rodney.

PSKS: Oh. Those guys would be the one.

HKA: In fact, I just seen their text saying, they were sorry, but they were not coming.

PSKS: She's [referring to JKS] not going to able to come right?

HKA: No, she's going to be on Zoom. I might need one more person.

PSKS: Did you try calling Sherry Cummings?

HKA: Yes, I tried leaving a message.

[53:36–55:35] Conversation continues about interviewing others redacted.

HKA: Is there any *hoe wa'a* (canoe paddling) up in Hanalei, is there canoe clubs?



PSKS: They do ... two clubs, one is NāmoloKama and the other is Hanalei Canoe Club.

HKA: Really?

PSKS: Oh yeah.

HKA: And what do they do, paddle up and down the river?

PSKS: They paddle up and down the river for sure.

HKA: Oh yeah.

PSKS: Yeah. And you get one-man-ers, the people with the one-man canoes, but *'a'ole nui nā po'e Hawai'i, nui nā po'e mai ka 'āina e ilaila* (not plenty Hawaiian people, plenty people from the land are there) ... but you know, *ke hana nei lākou I ke kahi mea, mea Hawai'i, 'ike Hawai'i* (they are doing something, something Hawaiian, Hawaiian knowledge). So ... *'oia nō* (itself) ... yeah. *'Oia ka mea maika'i, i loko kēlā hui ai ke kahi kanaka*. (Good thing inside that group, the few *kanaka*.) *Ke ho'omau nei lākou*. (They perpetuate [the practice].) Yeah ... the Chandlers, the Mahuikis, the Makas, my friend Art like that. *Ke kanaka hoe wa'a, hoe wa'a lākou* (The *kanaka* paddle canoe, they paddle canoe) ... and *nui nā po'e he'e nalu* (plenty of the people surf).

HKA: That's what I was going to ask you too, anybody surfing?

PSKS: The *kine*, Titus Kinimaka.

HKA: Surf?

PSKS: Him, the *kine*, you know who Luana 'Ālapa is?

HKA: Yes.

PSKS: Her cousin, or is it her cousin?

HKA: Because she lives ... she comes from Lā'ie. Right down the road from me.

PSKS: Right, right, that's the OHA (Office of Hawaiian Affairs) trustee yeah? So, her family is from over here. The Alapai family. So, Uncle Mitchell Alapai.

HKA: 'Ālapa. Mitchell 'Ālapa?

PSKS: I'm sorry 'Ālapa. 'Ālapa, yeah.

HKA: Yeah. That's who I should call, I know him.

PSKS: Right.

HKA: I grew up with him. He used to live right down the road from me.

PSKS: Yeah. *He kumu 'oia I ka he'e nalu.* (He's the surf teacher.) [57:14] Inaudible due to wind. [57:19]

HKA: He lives in Kīlauea right?

PSKS: No, well maybe. *'Oia paha nō, 'oia ma Kīlauea* (He perhaps [lives] at Kīlauea.) [57:24] Inaudible due to wind. [57:26] *Kakahiaka hele 'oia Hanalei, I ke kakahiaka nui* (In the morning he goes to Hanalei) ....

[57:29-59:05] Partially inaudible due to wind. Conversation about getting in touch with another consultant redacted.

PSKS: Those guys are surfing legends, you know [referring to Mitchell 'Ālapa] and Titus Kinimaka too another one. Oh, you got to do is go over there, see the sign, get his name.

HKA: [59:16] Conversation about getting in touch with another consultant redacted. [59:50]

And so that's the *he'enalu* (surfing). Do you know anybody who does any *hale* (house, building; referring to traditional grass huts) building in the area? No?

PSKS: We could ....

HKA: (Chuckles.)

PSKS: We actually .... so ... this is what Uncle Mike ... where the whole issue ... The issue of access comes in because we don't have a place to do work ... I do know now that DLNR (Department of Land and Natural Resources) has land in and around where Fish and Wildlife Refuge is. So, I'm going to go there and I'm going to see if I can get that *'āina* over there and see if we can lease it from DLNR. But *hale* building, it's on the comeback ... so, before I say that .... It was Uncle Mike's vision for us to be able to practice some of that down by the boat yard, right. So, he had envisioned the boat yard to be used to do these kinds of cultural practices, right. Once again, it's the issue of access or lack thereof. People ask the questions, why would you want to build a *hale*?

HKA: [01:01:06] Suggesting hale builder on the westside of Kaua'i, not in the area. [01:01:27]

PSKS: They are all good, they like to come down Hanalei do stuff, but no more place. *Mai ka pilikia* (Not the problem) ... *a'o hea wahi* (where doing learn)? No *ka holomua 'ana mākou kēlā* (That's why we no [can] progress).

HKA: So ... let's go to *mo'olelo*, we did *wahi pana* (legendary or sacred places), we did *kalo*, and then we talked about the rains and the winds ... I going send this to you so you can .... There is stuff ... you might know all of this.

PSKS: Maybe I don't, you know.

HKA: I'll just send it to you because I got all these places too on top here.

PSKS: It's *kine* of depressing actually ... I'm really glad, you're here doing this ... It's *kine* of depressing because ... we don't have regular access. You are bringing up all this stuff, and I feel a little bit embarrassed because ....

HKA: No ... it's not your fault that you don't have access ....

PSKS: So now ... I'm so glad that you are telling me this, so now I can go to that place about ... when I ask.

HKA: So ... Princeville, was named after Prince Albert ....

PSKS: Prince Albert.

HKA: Kamehameha [IV] ... Alexander Liholiho and Queen Emma's son, right?

PSKS: Son, Prince Edward Albert, yeah.

HKA: Right.

PSKS: Isn't his Hawaiian name Kalelehōkū?

HKA: Yeah, this place is named after him, right?

PSKS: It was, so all of the names that you see are relevant.

HKA: I see Emmalani ... yeah.

PSKS: It's all the royal names yeah. But you know ... I was teaching Hawaiian language over here for a little bit with the *hālau* (hula group, long house) in Princeville, right over here. It was okay, it needs to happen. Because this *wahi pana* is *ali'i*, right. We would have a wonderful walking tour over here with all the stories.

HKA: What is his name? Wiley .... R. C. Wiley. Let me try and check. Was somebody who ... who was the person who had Princeville ... because was one Ha'ole (Caucasian) guy who had Princeville, right?

PSKS: Was Wiley I believe.

HKA: Was Wiley ... yeah, it is R. C. Wiley, okay. He had an estate here.

PSKS: Was that a gift from the *ali'i* to him?

HKA: 1856. Queen Emma was here. I'm not sure how he got it. I think I have it some place. I remember reading something ... I think it was ... Kau'ikeaouli (Kamehameha III) I think, because 1856 was Kau'ikeaouli still yet, and then in 1848 was the māhele, that's why. And so, Alexander Liholiho and Queen Emma ... Ruth was over here too in 1867, she had a picnic in Hanalei.

PSKS: Ke'elikolani?

HKA: Ke'elikolani ... she had a picnic on the Hanalei River. And King Kalākaua in 1874 at Hanalei Bay.

PSKS: There should be ... some *mo'olelo* in there. I think my great-great-great-grandfather, Titcomb spent ....

HKA: Charles Titcomb?

PSKS: Yeah ... he used to take care of Queen Emma's mother. She came here.

HKA: Charles Titcomb ... 1856 Kamehameha IV deeded 762 acres, east of Hanalei Bay, on the north side of Hanalei River to Charles Titcomb.

PSKS: Yeah, that sounds yeah.

HKA: And that was Liber 7:284–286. Titcomb then sold the land to R. C. Wiley in February 1863 [Liber 16:215–217].

PSKS: I don't think he sold everything, there is still some land.

HKA: Oh good.

PSKS: Oh, we do know that ... because the land ... says it's clear that it's still Titcomb land.

HKA: Then there is a lease ... lands that were awarded to A. S. Wilcox ... Princeville Plantation lands, crown lands on Pu'u Pehu. These lands were ... and I think I seen it on the map ... I think I seen the grant ...

PSKS: That would be Aunty Patsy's family.

HKA: Charles Titcomb had a ....

PSKS: Yeah, he was a coffee farmer.

HKA: And he had a silk plantation.

PSKS: Yeah.

HKA: He had a silk plantation.

PSKS: The first coffee farmer ... plantation ....

HKA: Yeah.

PSKS: In Hawai'i ....

HKA: Yes, in Hawai‘i.

PSKS: Right, right, right.

HKA: Yes, he was.

PSKS: He was *kine* of a rebel.

HKA: I thought coffee came after sugar, but sugar came after coffee. It was coffee before it was sugar.

PSKS: Right, at least one on this side of the island.

HKA: Yeah.

PSKS: The plantation was in Kīlauea.

HKA: I never knew that coffee came before ....

PSKS: Right, right, right. I know that he spent time with the royal family. He used to take Queen Emma or Queen Emma’s mother. I think they were good friends. It’s one of the *mo‘olelo* I read, yeah.

HKA: Queen Emma used to come to Punalu‘u, so my great-great-grandmother used to hang out with her.

PSKS: Oh, my goodness, yeah.

HKA: Yeah. Had the Kawanakoa(s) ... and they had a house over there.

PSKS: Are you related to the the Kawanakoa(s)?

HKA: No, I don't think so, but they were good friends with my .... No, I shouldn't say that because I always tell people that mostly all Hawaiians are related.

PSKS: Could be.

HKA: Most Hawaiian are related.

PSKS: The Kawanakoa stand out as a family that are members of the royal family ... Aunty Abigail.

HKA: They have ties to over here.

PSKS: Right, right, right.

HKA: So that was the Mahele ... You got anything you want to add about the time of the Mahele that you know anything about?

PSKS: No, I don't have anything to add.

HKA: Let's move on to transportation. So, like the trains, highways, railroads do you know anything about that?

PSKS: Not really, no.

HKA: So, Knudsen from that side [referring to the westside] ... he came this side, yeah, in 1893? Were there any railroads on this side ... had, right? Got to have it because it had sugar, right?

PSKS: You know who would know that stuff ... yeah, there is, yeah.

HKA: Got to have, right? But I was trying to look for information about it, and I really couldn't find much about it.



PSKS: No, there is because they were a really big thing about it because of the landslide over here, right?

HKA: And then had cattle too.

PSKS: Yeah.

HKA: So ... the railroads ...

PSKS: So, if there were cattle, there must have been. Oh yeah, Hanalei ... that's what they used to bring the cattle ... right.

HKA: Yeah, the cattle ....

PSKS: At least railroads to transport ... yeah, sure ... sugar cane, probably for the cattle.

HKA: This is the last section, what are your concerns about the Hanalei area? Any specific locations?

PSKS: If we are talking about in and around the river ... we just don't have access anymore.

HKA: Okay, so that's your main concern.

PSKS: Yeah, we don't have access and no way to participate and show the wisdom of our ancestors with regards to how we might contribute to some of the things that's going on. I'm trying to ... I don't know how to do this politically correct ... but the truth of the matter is ... if we're saying that the floods impacted the roads and all this other kind of stuff, surely it impacted something Hawaiian ... some taro patches or some places where Hawaiians used to go to enter into the areas so they could catch *'ōpae* (shrimp) or to catch *'o'opu* (fishes included in the families Eleotridae, Gobiidae, and Blennidae) whatever the case is. So ... re-establishing those points or access points, I think are really important. I think once you can re-establish access points, and once you can re-establish that it's okay for people to go in there and do their stuff it will be better.

HKA: So, there are not any piers going up or down so people can access the river?

PSKS: Mmm ... mmm. There's not, there are some places ... That's why I was telling you about the place DLNR [Department of Land and Natural Resources] has a little bit *mauka* (towards the mountain, inland), it's still in the valley, and it's just right above the ... Fish and Wildlife area. So, I'm hoping that we can, if we were to ... establish the Hanalei River Heritage Foundation an area, then we would have a base that's right on the river. It's important for us to have a voice. Currently, I don't think we have one, to be honest—at least not a very strong one, but if it is a voice, a *kine* of political one. But for the visitor industry, all of it are all not Hawaiians. When HTA (Hawai'i Tourism Authority) came over to her to do a presentation, they had the meeting in Princeville. How much more obvious can you be that you did not come to any Hawaiian neighborhoods ... or any neighborhoods where any people who work in the visitor industry ... but you had to come to the richest place probably in all of Hawai'i and ask people for their opinion. Well, of course, their opinion is tainted because they think that Hawaiians are happy at just being slaves, not slaves but ... being the happy workers ... the landscapers ... the valets, or whatever the case is. So, that's what the people's expectation of us are ... So, when you have a meeting like that where HTA sponsors, and all the experts are not Hawaiian, they don't know anything about Hawaiian language or cultural practices—the experts—okay, right on. So, a process like this could help us change that.

HKA: I hope so ... And I thank you so much, *mahalo nui*.

PSKS: No, *mahalo iā 'oe* (thank you).

ORAL HISTORY INTERVIEW

With

Mitchell Ka‘anohelani ‘Ālapa [MKA]

July 12, 2024

Princeville, Kaua‘i

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

Recording file name IA202122\_2024-07-12\_Mitchell Ka‘anohelani ‘Ālapa (1).MP3

Recording file name IA202122\_2024-07-12\_Mitchell Ka‘anohelani ‘Ālapa (2).MP3

HKA: *Welina kākou* (Greetings everyone),<sup>1</sup> this is July 12, 2024, we are on the *mokupuni* (island) of Kaua‘i, in the *moku* (district) of Halele‘a, *kulanakauhale* (town) of Princeville. I am Kaumaka Anae representing International Archaeology, LLC (IA), and we are conducting a cultural assessment interview for the EKNA Department of Transportation (DOT) Hanalei Riverbank Stabilization project. And I am here with Mitchell ‘Ālapa, and, Mitchell, can you say your full name please?

MKA: Mitchell Ka‘anohelani ‘Ālapa.

HKA: *Mahalo* (Thanks). And do I have your permission to record this interview?

MKA: Yes.

HKA: *Mahalo nui* (Thank [you] very much). And before we start, I would like to say ... if I seem so *maha‘oi* (brazen), it is just for this interview (chuckles).

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<sup>1</sup> Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (<https://wehewehe.org/gsd12.85/cgi-bin/hdict?l=en>). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

MKA: I know.

HKA: So, let's begin our interview. So, what we are going to start off with is *mo'okū'auhau* (genealogy) or your genealogical connection to Hanalei or the broader Kaua'i. Can you please inform me of that?

MKA: Well, I grew up in Kaua'i right. I came here when I was two years old from Hau'ula and I lived in Hā'ena, up in Wainiha with my stepdad. That was their *kuleana* (small piece of property within an *ahupua'a*, tenure; responsibility; privilege, right) up there, the Kaneali'i side. So, being raised by the Kaneali'i family all my life, I used to think that was *kine* (Hawaiian Pidgin language for sort of, somewhat, and/or "whatchamacallit") of hard. But I didn't know that my stepdad and my dad were good friends—but my dad was always on the boat, working—on the ships, you know that yeah?

HKA: Yes.

MKA: So, I guess along the way my mom had a flame for my stepdad. So that's how I moved to Kaua'i because he was from Wainiha. And the only reason why they left was because they had to put the first Hawaiian Homes up in Papakolea to get 'em, that was the first Hawaiian Homes. That's why they get the road called Kaneali'i road up there. So, from that time on, he was like my babysitter. And for watching me, it was *kine* of hard, I was *kolohe* (naughty, mischievous). Anybody knows me, know that I was *kolohe*. I was a rascal. I did what I like, go where I want, and act the way I like ... I guess that was in the blood. Not knowing that it was really in the blood. I didn't know.

As I got older, I started doing research like everybody. Oh yeah, it is real, no wonder you know, but that's how I learned. And instead of stopping there, I kept journeying it and checking it out, and I found out more truth, then I was so happy I didn't believe anything in school anymore ... because they lied. So, I decided to go on my own. And when I was running around back and forth going from Kaua'i to Honolulu, I was living in Ha'iku with Samuel Lono [a *kahuna* or priest who used to live in Ha'iku on the windward side of O'ahu]. In my younger years, I cleared that valley with the Kalua family from Waimanalo ... Chauncy guys. And—all the *braddahs* (Hawaiian Pidgin for male or brother) from Kahalu'u, Waiāhole, Waikāne ... the Taradis, and the Aweaus. "Oh Mitch, how you related to all these guys?" The 'Ālapa side. The Samoan side never wanted to know the

‘Ālapa side because the Samoan side was really good, but because the mix blood with the ‘Ālapa and everything, they didn’t understand.

The old folks didn’t understand history while they were getting used. And so, when I picked up on that, I went on a rampage. I told myself, everything in Hawai‘i was stolen, plain and simple. And our queen, they did something that wasn’t supposed to be done, they killed her—and switched her body with another lady at the pier, to make it look like it was her catching the boat, but they already killed her. And I played in the castle as a kid many times by the tamarind tree. And I played in the dungeon because my dad would always take me there because he was with the merchant marines, right.

So, I grew up on Hotel Street beside Kaua‘i. And everything I learned in Chinatown, was the Pākē (Chinese) movies. I know all about the Pākē movies and karate, and all this Sonny Chiba, and all the sword playing from when I was little because that’s where I grew up ... Hawai‘i Theatre, the Varsity, and King Theatre. For 25¢ I got to do everything I wanted to do with 25¢ when I grew up—And that was plenty money back then—But I always used to love eating chop suey. So, I always ate at Wo Fats in Chinatown. And I loved the smell of the fish market. That’s a great smell. And if you don’t pay attention, those guys are fast—especially when it comes to money. But I love that place, even till today I love that place. I got pictures of Wo Fat Restaurant. And I got one friend over here, and that was his grandfather. He is an ex-fireman, just retired. That’s his grandfather on the Korean side. He took me to a restaurant in Las Vegas, that’s named after Wo Fats, and the food tasted the same. I have a great time knowing everybody.

But I did learn a lot over my life growing up in Kaua‘i. I was a rebel, but I learned a lot of respect from the people on Kaua‘i.

HKA: So how long did you have your surf school, and do you surf?

MKA: Not anymore. I ride motorcycles.

HKA: But you were surfing for years as well, right? How many years have you been surfing?

MKA: All my life. From when you were a little kid. I grew up with one of the best surfers in Hawai'i. Titus, my cousin Titus Kinimaka. And they are all from Hau'ula too. Him and I went Catholic school together. Busy bodies, right? Fall in love with the same girl. Fight with each other all our life, but we are still the best of friends.

HKA: What Catholic school was that?

MKA: St. Catherine's.

HKA: And where is this?

MKA: In Kapa'a.

HKA: In Kapa'a.

MKA: And I thought ... I was kicked out of the public schools, that's why. I had to go to a Catholic school. And I didn't want to go to a Catholic school because I thought all those people was just dressed in black, with the white thing, and I thought they were boogeymen. So, it took me many years to understand this. But in the fourth grade this nun taught me one word, perseverance. When she taught me that word perseverance, I understood the meaning. So that's what got me out of trouble and into trouble. All I had to do was persevere. It's like the figure eight, never ending circle.

HKA: Yes, infinity.

MKA: Yeah. So, I figured it out at an early age. And my dad in Honolulu didn't like that. Remember the time I took the car. You remember that one? You remember the time I took the car and hid the car at the Kāne'ohe graveyard? Oh, he was mad at me, boy. But there was another time when I was on the North Shore

[09:00–10:56] Conversation about subjects not pertaining to this interview redacted.

HKA: So, when did you start your surf shop?

MKA: Twenty-eight years ago.

HKA: At Hanalei?

MKA: I started off with four surfboards. You've seen all the boards down there now and in the back?

HKA: Yeah. So, you guys have your shop in the valley, and then you guys take people to the ocean.

MKA: Well, Aunty Patsy's husband, Uncle Mike Sheehan, let me have the beach access by the river mouth. That was his property. So, he let me have that place. I had that place for almost seven years. And then they came and took the land away, eminent domain.

HKA: Who, the State?

MKA: Yeah! And then boom! That's all right, so he gave me the back part by the old canoe club, by the fence place. That was my spot, I had that for a few years too. I had that parking lot full of people surfing with me. Then the State again, eminent domain. So, I came up with a plan, I wanted to buy the place, right. I wanted to put two restaurants, two stores over there, right. Then Uncle Mike was, ha. I give you seven, I told him. But he knew he couldn't sell it to me because he knew they were going to take the land too. So, they gave him five. But I wanted 'em for seven. I had sponsors in the mainland that were going to give me \$ 7,000,000 to buy that place. I would have had plenty of power over there, right, because I wouldn't let anybody go in there to fish through the piece of property unless they were local boys. Even like all the boats that's going down, that's all of Mitchell Boy's friends, my son, they all surf together. So, they found a part in my heart—I can't be how I used to be. But I still do not like all those boats taking people down there and dropping them off, and instead of walking the trail first to get your blood, your *mana* (spiritual power) in the land, instead of cheating going on the boat. Just like the helicopters, I don't like the helicopters they desecrate the land back there, fly in and out of those valleys, and the old folks that live back there and died ....

HKA: Just recently they ....

MKA: Yeah, yesterday at 1:30 [p.m.].

HKA: Yeah, yesterday, right.

MKA: Yeah, so, I am one of those—people that do not like all of this, so I keep to myself, so I don't get into trouble. And people who know me know I have been good for the last 28 years. And I try and stay away from the beach now because I always get into trouble at the beach, because I can't stand watching things. I would rather go look for fish. That's how I remember your dad. Your dad always liked to catch me mullet. I go mullet fishing with him, right. And he was the first guy I ate raw mullet with. He liked his raw mullet. So, ever since then, I always eat raw mullet. Ever since I ate raw mullet with your father, I like that. I stepped up to the *moi* (threadfish [*Polydactyls sexfilis*]) but you know.

HKA: Yeah, I love the *moi*.

MKA: And I caught 'ahi (yellow fin tuna [*Thunnus albacares*]) in my net on the shoreline.

HKA: The shoreline, 'ahi? Where, Hanalei?

MKA: Kalalau.

HKA: Whoa—it's deep, yeah, over there?

MKA: I lived there 13 years [referring to Kalalau Valley]. After you guys saw me in Hau'ula, I lived 13 years there. They used to call me Rambo. While living there, I got to learn how to live off the land in the old style.

HKA: Wasn't there a lot of *hīhīwai* (endemic grainy snail [*Neritina graposa*]) in there too?



MKA: *Wī* (another name for *hīhīwai*)?

HKA: Yeah, *wī*.

MKA: I carried out 300 pounds for a wedding, no, for a baby *lū‘au* (formerly a feast, party).

HKA: People was saying that all the Caucasian, foreigners was going inside there to live and eating it out too, yeah?

MKA: Yeah, they were eating it too. But had the *‘ōpae* (shrimp) ....

HKA: The *‘ula* (red), the *ōpae ‘ula* (red shrimp)?

MKA: Yeah. Even—Punalu‘u still get, Green Valley.

HKA: We have some—

[15:53–17:52] Conversation about subjects not pertaining to this interview or Hanalei redacted.

MKA: Over here I go through the tunnels, come out Hanalei from Wailua. Inside there get plenty ....

HKA: A lot of them from the sugarcane time, and a lot of those tunnels were built by the Chinese.

MKA: Chinese.

HKA: Even over there in Punalu‘u.

MKA: Inside there are plenty of prawns. But I don’t know, things run through my mind if I should shut the tunnels, so the water goes back to where it came from. So, everybody is fighting for water rights. I decided to kick back and understand the fight for water rights. And see how they are going

to preserve the water rights. Everything was going fine, was going good, until they let everybody drill wells, and diverted the streams.

HKA: Also, you know when had the sugarcane, they drained the water so they could plant the sugarcane, but they also diverted that water. All down west side too. Before people could go on a canoe from Waimea to Polihale at one time, but then they drained the water, and they diverted water.

MKA: So, my ex-brother-in-law, he died, but he was the mountain man of Kōke'e. So, I grew up—my brother-in-law with honor, because he knew how wild I was, I had to leave the west side alone, even if I was a mountain man, right. Because of my brother-in-law, he was well-respected on the island ... I respected him, and I gave him my word, and to this very day, I know everybody on the island. I'm happy, because I can go to anybody's house like I did in Hau'ula and go eat. I still can do that, go to anybody's house on Kaua'i and go eat, like I did when I was a little boy growing up in Hau'ula. So that's the main thing. And my kids, do the same thing, they look at me, "What, Papa?" I go, "You better go, you better go eat"—but that's the way I was raised with the Kaheles. Uncle Yopa guys across Hau'ula Park, where the old house is over there by the *kamani* (a large tree [*Calophyllum inophyllum*]) tree. That's where my grandmother's church was. By the *kamani* tree. I had my first baby *lū'au* over there.

HKA: Up on the hill.

MKA: No, at Hau'ula Park, over 2,000 people.

HKA: No, you know the church, that's the one you are talking about, the one on the hill.

MKA: No, that was one church my mother had in the garage a long time ago. But the one by the *kamani* tree, towards Hau'ula Park by the Kahele's place. Right by the river.

HKA: Oh, yeah. I know where you are talking. That's the other Kaheles, not the Kaheles up the hill.

MKA: So, my grandma, the one had that church, was a Mormon too. That's how my dad, Elwood, knew my mom. My grandmother used to be a Mormon. Then she lost her three babies, then she started

her own church with Kawaiha‘o. Later, made her own church called the Gospel of Salvation. The one across from—Kawehi’s place by the rock wall. The church where there’s a house now.

HKA: Where are you talking?

MKA: By Cooper Ranch at the bottom.

HKA: Oh, yes, yes, yes. Get one church up there, yeah, where Auntie Danette them live. Get one Mormon Church up there too you know.

MKA: Yeah.

HKA: You are talking about the one down yeah, I know where you are talking about.

MKA: That’s my grandmother’s church. That was supposed to be mine, but my cousin ripped me off.

HKA: The one right there on Kukuna, yeah?

MKA: And the one Houghtailing, that’s mine too, and Kohala, that’s mine, and the one in Maui, and the one in Moloka‘i. My aunties ripped me off, my mom did not want nothing to do with the sisters. They were fighting against the 10% tithings. So, they all go Mitch, you figured it out? You don’t like the pulpit, I said, no, Monday I don’t mind going bible studies, Wednesday I don’t mind going to choir practices, but Friday I don’t want to get into this trip about 10% tithings, and what you are going to do with the 10% tithings. They go, “Oh you figured it out, yeah.” “Yeah, it took me a while, but I know you guys couldn’t trap me to be a minister.” I go, “I don’t want to be a minister yet. I have my own ministry, I am a bad boy, and I like to hang out with bad girls, and share my stories with them.” I let them figure out whether I am a bad boy or a good boy. Because—Jesus died on the cross, they had the thief on one side and they had the robber on the other side, no they had the murderer on the other side. And he looked at those two guys, today you shall be with me in Heaven. So, I had a hard time figuring it out there because King David did the same thing with Bathsheba’s husband.

HKA: Sent him to die.

MKA: Right. So, the Lord forgave him. So, I was really blown away right. And then he had a son, King Solomon ... he had 700 wives, 800 girlfriends, that's 1400 times a month. So, I was really trying to figure this out. But the Lord still loved him and forgave him for all his things. Because he went and married all the girls from the different countries. So, he thought he was doing the right thing. But that's how we all became Gentiles, we all related. They go, "We ain't arguing about that with you Mitch."

HKA: We came off of the olive branch.

MKA: But it was in the Book of Mormon too, Hawaiians, right. Which one is that ....

[24:39–25:57] Conversation about subjects not pertaining to this interview redacted.

MKA: .... I find out she [referring to his mother] was a Mormon. Her and my grandmother Alesi were good friends, Sava'inaia. That's how I am related to all the Sava'inaia's, right—and all the Samoan clan.

HKA: The Sava'inaias?

MKA: The come from Sava'i.

HKA: I wonder if the same ones related to my husband.

MKA: Yeah, the Sava'inais and the Awas, that's all family.

[26:29–27:45] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: So, you don't do any *lo'i kalo* (taro pond field), yeah? Your shop is in the valley, right? I seen where you stay.

MKA: Yeah.

HKA: And you been there all the time? So, you guys pick up the people there and go to the beach?

MKA: Yeah. It's because the County.

HKA: How much people do you guys have a day?

MKA: It varies, sometimes we do two buses.

HKA: Oh wow, that's a lot.

MKA: Sometimes 38. I got the biggest surf school out there.

HKA: Wow.

MKA: That's why we got so many boards. And then people used to get jealous, right. I used to clean the beach, right. Just like Kahana Bay—*konohiki* (headman of an *ahupua'a* or land division), right. So, I gotta tell people what a *konohiki* is, right. I go, I never lost my rights, they go, you are kidding....

[28:49–29:02] Conversation about subjects not pertaining to this interview or Hanalei redacted.

MKA: .... I came home to Kaua'i, and I found out I was the real *konohiki*. Then I said, I can go anywhere on Kaua'i now. But it took time because I had to meet everybody from the different parts of Kaua'i and meet the families, and get blessings, and you know, understand their ways and respect them for what they are, and then they respect, and the next thing you know, we all are grooving. So, when we are all grooving together, we all welcome each other's house.

HKA: So, on average, how many people do you take in a month?

MKA: Maybe 100.

HKA: So how long does your surf lesson last?

MKA: Hour and a half.

HKA: Hour and a half. I was reading some reviews about your surf school, and they said just in an hour they learn how to surf.

MKA: And we teach the blind. I'm the only guy, when Bethany Hamilton got bit, she couldn't handle the love she was getting from the world, she didn't know what to do because everybody with a handicap wanted to come here, yeah. I helped her out on her first escapade. And then, I told myself I cannot be doing this all the time, that's going to take too much from me. They gotta go do their own—I don't have time for this because I *kōkua* (help or work done without payment) that, right.

HKA: Yeah.

MKA: My love, right. I love the water, but I couldn't do this all the time so, Bethany went and found her own little niche and got her niche going. Somebody else jumped on her niche and started Koa. That's how Koa started in Honolulu for the handicap. But it all started from Hanalei with Bethany. And ever since then my other friend Makali'i, Tony Moniz. You know Tony, Waikīkī, he blows his mind, I go *brah* (short for *braddah*, a male or brother), I used to go your house when you were a little boy. Hah. I know your father. Hah. House Street, Kalihi. Hah. I go, *brah*, I grew up all over.

HKA: Yeah, you have.

MKA: That's why they blow their mind, nah Kalihi. Kalihi was my other good spot, you know.

[31:45–32:42] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: So, have you ever fished in Hanalei River?

MKA: Yeah.

HKA: And what did you catch?

MKA: I catch mullet, what else I catch over there ....

HKA: *Ulua* (a game fish: certain species of crevalle, jack, pompano)?

MKA: *Ulua*, what else, 'oama (young of the weke or goatfish) ....

HKA: 'Oama go inside the river? They go inside the river in the freshwater.

MKA: They go all the way up to the bridge. And the *akule* (big-eyed or goggle-eyed scad fish [*Trachurops crumenophthalmus*]), all the way up to the bridge, yeah. Hanalei Bridge, the *akule* go all the way up to the Hanalei Bridge and the *āholehole* (Hawaiian flag tail [*Kuhlia sandvicensis*]).

HKA: I can see the *āholehole*, but the *akule*, and the 'oama ... there gotta be some kind of good salinity there then.

MKA: Yeah.

HKA: Yeah, going into the river?

MKA: You went up the river already.

HKA: No.

MKA: You never go up the Hanalei River.

HKA: No.

MKA: The next time you come over here, call me up. I go take you for a ride on the paddle board.

HKA: Yeah.

MKA: Yeah, I go show you the grounds.

HKA: Because right now is *'oama* season.

MKA: No.

HKA: Yeah, get *'oama* now.

MKA: Honolulu, but ... Kahana Bay on the corner.

HKA: Yeah, get *'oama* by my house.

MKA: By the rock wall.

HKA: By my house. My house get.

MKA: You see, I know.

HKA: Get the *nehu* (anchovy [*Stolephorus purpureus*]) all on top and the *'oama* all on the bottom below the *nehu*.

MKA: I know over there. But over here, the thing working its way this way from Fuji Beach in Kapa'a, coming around to Rock Quarry down here in Kaili, from Kaili coming around to the park by Kalihiwai, and from there spread down to 'Anini by the *kamani* trees, and then work its way around the corner to Princeville, until it ends up in my net. So, what I usually do I get the *'a'ama* crab (black crab [*Grapsus grapsus tenuicrustatus*]), smash it all up, put it in the net bag, tie it to the tree, and I hang 'em from the *kamani* tree over the water. So, they all come hang out over there.

HKA: Why, because it releases stuff?



MKA: Yeah, you put it over the water—because I smashed it all up.

HKA: Almost like *palu* (fish bait, chum).

MKA: The *palu* bag, so all the ‘*oama* come over there.

HKA: Oh, my goodness, they must love that.

MKA: Yes. I’m in, then I’m out, one time only.

HKA: Yes, of course.

MKA: In and out, but I do though, I share with everybody, because I cannot eat all that, right.

HKA: That’s a lot then.

MKA: So, I share.

HKA: How much *pākini* (tin pan)?

MKA: The ‘*oama*?

HKA: Yeah.

MKA: One whole big cooler. The big quart cooler. Filled to the top without water. I go around the neighborhood and give it to everybody.

HKA: Oh man, that’s the Hawaiian popcorn. So, how’s the *he‘e* (octopus [*Polypus* sp.]?)? Not going be in the inside of Hanalei, going be on the outside right?

MKA: Yeah. On the other side, Waikoko or Waipā, on that end. But not too many guys like go because get one big 18-footer [243.84 cm] out there.

HKA: What kind, tiger?

MKA: Yeah. But the thing no bother nobody—out of state [out of mind].

HKA: He's just the governor.

MKA: Yeah.

HKA: So, you ever paddle canoe out there by Hanalei? Get two canoe clubs, yeah.

MKA: I only paddle for me to have fun. Mines are all surfboards.

HKA: So sometimes you go up and down the river, paddle up and down?

MKA: Even nighttime with the throw net.

HKA: So, when you go with the throw net what you doing for?

MKA: Nighttime?

HKA: Mullet?

MKA: Mullet, *āholehole*, yellowed belly ones.

HKA: And what big then, yeah.

MKA: You know yellowed belly that's big.

HKA: Yeah, big.

MKA: Good in the frying pan. I would rather have *āholehole* than mullet.

HKA: Me too, I'd rather have *āholehole*. People don't like to clean it, but I don't mind.

MKA: [MKA showing HKA a photo he captured on his phone ] This is the sunset at my place.

HKA: Beautiful.

MKA: And where's that other one?

HKA: Have you ever helped with the *loko i 'a* (fishpond) inside there?

MKA: No, because I don't want to. They wanted it, I didn't want that, so that's their *kuleana* (privilege; right; responsibility). I can make my own, but I don't need acres and acres and acres. And I got the whole mountain.

HKA: Oh, you get the whole ocean.

MKA: Yeah, that's my icebox<sup>2</sup>.

HKA: That's what we call my place, the icebox.

MKA: That's the icebox, you ....

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<sup>2</sup> There are *lawai'a* who consider special fishing areas their refrigerator or "ice box" where they are able to retrieve the fish of their choice.

HKA: Do you know any *mo'olelo* (story) about the area, like about Kawelo? Kawelo, the chief? Kawelo from Hanalei?

MKA: The only thing about Hanalei I know ....

HKA: Yes, tell me the story.

MKA: The chief, how far back we are going?

HKA: Go for it, any time in Hanalei.

MKA: Hanalei has to do with before the Chinese came. They were all raised in the old style like Hau'ula. Old style. You come to my house, I go your house. You come my house eat, I go your house eat. And back then, everybody eats with their fingers when I grew up. Their hands inside the *poi*, you know what I mean, everybody. No more such thing as *pilau* (bad, rotten) thinking.

HKA: Yup, exactly.

MKA: Your mind good, we not catching cold from each other. We are not catching COVID.

HKA: We used to eat like that.

MKA: But that's the way I was raised. Everybody used to get mad at me because I was a rascal. I didn't like high school; I just like to play and play. Like it was in Hau'ula, right ... play, play, play. But I was gifted to play because I had a time limit ... and my time limit is still going. It hasn't stopped. You know, I'm on a bike, right, couple bikes. But my parents raised me really good. My stepfather treated me really good. There are some things I can tell and some things I cannot tell....

[40:06–52:48] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: Where did you hunt at?

MKA: These whole mountains. I lived in the mountains for 13 years.

HKA: Oh, Kalalau, did you ever hunt in Hanalei?

MKA: Yeah.

HKA: And what did you find in Hanalei that you hunted?

MKA: [53:04–56:10] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: So where do you guys go get *wana* (sea urchin [*Diadema paucispinum* and *Echinothrix diadema*]) over here?

MKA: Outside Waipā.

HKA: Outside Waipā?

MKA: Yeah, and then Anahola, Āliamanu. When the *kukui* nut tree (candlenut tree [*Aleurites Moluccan*]) is dropping, it's fat.

HKA: The *hala* (pandanus [*Pandanus odoratissimus*]) when you see the fruit ripen. Even sometimes the *hau* (lowland tree [*Hibiscus tiliaceus*]) too, but it's too early right now. It should be August, the end of July, August.

MKA: That's the old Spanish Fly.

HKA: I love *wana*, that's my favorite food in the whole entire world.

MKA: My mom used to like that. We would go down to the beach, everybody picking, and in the gallon, they spoon all the meat.

HKA: I like to eat right from the —

MKA: Crack it open and right there.

HKA: You get the teeth, and you suck, or you smash it up and put it in a jar with the *pa'akai* (salt), and you make —

MKA: You really learned from your father, yeah.

HKA: You make the gravy, and you put it on your raw fish. The gravy from all the teeth.

[57:22–01:00:42] Conversation about subjects not pertaining to this interview or Hanalei redacted.

MKA: That's why I tell all the guys over here, you guys going sing the same song Jerry Santos sang, "You used to catch 'o 'opu in the mountain stream," because slowly disappearing.

HKA: That's what I was going to ask you too, you seen 'o 'opu (fishes included in the families Eleotridae, Gobiidae, and Blennidae)?

MKA: Every year pretty soon, another month or so, the boys down here always give me 10 every summer.

HKA: What, 10 'o 'opu?

MKA: Big ones.

HKA: You guys get big kind?

MKA: I call up Dotty, Harvey's wife.

HKA: How is she?

MKA: My ex-[wife] Dotty, she's doing good.

HKA: Yeah, where does she live now?

MKA: Kapa'a. She came home after she'd heard I calmed down.

HKA: Yeah, how long she was living over here?

MKA: She has been home, what, 20 years now.

HKA: I remember she had short blonde hair and colored eyes, right?

MKA: Yeah.

HKA: Your daughter has almost the same shape as her.

MKA: Which one, Kanani?

HKA: Yeah, the one you showed me the picture of.

MKA: The one Kanani was with her boyfriend, husband, yeah.

HKA: Yeah.

MKA: [01:02:15–01:06:40] Conversation about subjects not pertaining to this interview or Hanalei redacted.

That dog [referring to the Cane Corso, a dog that hangs out at the surf shop in Hanalei town] is a work dog, you know.

HKA: How come you guys have him in the kennel?

MKA: I don't trust cars over there, that's an [expensive] dog.

HKA: I mean he's beautiful —

MKA: That dog is a good dog.

HKA: The color is mean, almost like a steel gray, steel blue type of thing, type of color.

MKA: [01:07:15–01:08:13] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: So, the dog hangs out with your son over there?

MKA: The dog surfs.

HKA: What does your son do over there?

MKA: That's his surf shop, that's his surf school. I gave it to him.

HKA: So, he teaches, he coaches?

MKA: After we went through one war in Kaua'i with the boats and the water, they couldn't force me because I pulled my Kaumuali'i (the last sovereign on Kaua'i from the 19th century) move on them. The—"Haole's not getting the beach," that's all I said—okay? "You guys already took the boat trip, the charters to the Nā Pali Coast, you guys not having Hanalei Bay. We're going to have a war. And the war is not going to stop. This thing belongs to us, to us local boys. I not going let these Haoles come over here and take something that don't belong to them." So, I was ready to act like Hau'ula boys in the old days. I go, please Lord don't let me be like that. Right, because I grew up that way, right. So, I prayed to the Lord to please not let me be like that.



HKA: So, that's why you don't go down the bay anymore?

MKA: Yeah, I don't like to see things that I don't like

HKA: Tell me what your best experience on Hanalei River.

MKA: The Hanalei River?

HKA: Yes, what was your best experience over there, memorable experience?

MKA: I used to catch a lot of fish in that river.

HKA: Like you said, mullet yeah?

MKA: Mullet, *āholehole*, *moi* (threadfish [*Polydactyls sexfilis*]) ....

HKA: *Moi* too inside the river?

MKA: Right on the edge, right on the pocket. Eh, the State, the County guys jump off their machine, and come help me surround 'em. Eh, in their work clothes they jump off the county machine, run in the water, block for me, and I surround 'em.

HKA: You surround 'em, nice.

MKA: Certain time of the year, when not supposed to. Eh, they jump off the machine. It's the same thing I did when I hit the 10 *pākini* (thin bin), this time of the year—one day dry, second day dry. Just like one potato chip. Once in a while, I go get the *moi li'i* (small growth *moi*). I know where the *moi li'i* stay, I like that—

HKA: You eat it raw or just fried?

MKA: Raw.

HKA: Raw, yeah. Just like the *halalū* (young growth of the *akule* [*Trachurops crumenophthalmus*]).

MKA: Eat it just like a cat.

HKA: Yeah.

MKA: Sucking the meat off.

HKA: Like the *halalū* too, yeah.

MKA: Right now, *halalū* is supposed to be coming. I got one 2-inch eye [referring to the eye of his throw net] supposed to be coming, it didn't even touch water yet, with the rope for the pier [referring to Hanalei pier].

HKA: Yeah.

MKA: That's why you gotta get up 5:00 in the morning and you gotta be at the pier before the first guys splashes the water with the boat.

HKA: The pier by Hanalei?

MKA: Yeah. You gotta be the first guy there so you can yell at people to stay out of the water. So, if you get there first, they listen. Especially, if they see you walking on the pier, both sides, zigzagging with the net, they know, no go over there. I don't let anybody splash the water until after my first throw. So, I have fun in Hanalei. So, everybody who knows me, they know I like that. They all understand Uncle Mitch. They all call me Uncle Mitch, right. But they all understand me. I go first, you see me over there with my net, don't touch the water okay. You can have the water after I'm done. All the guys my age fish, they all do the same thing, right. They all come down, and we all look at each other, right. So, we watch the whole beach, and everybody looking for the red, and the

dark, right ... the shadow, right. Get all the *pāpio* (young stage growth of the *ulua* or game fish) running along the front right now, but everybody waiting for the 'ōpelu (mackerel scad [*Decapterus pinnulatus* and *D. maruadsii*]) right now.

HKA: I love the 'ōpelu.

MKA: All the 'ahi (yellow fin tuna [*Thunnus albacares*]) boat guys like 'em, yeah.

HKA: When I used to go fishing with my ex, I didn't want to eat the other fish that they fish, I like to eat the bait, the 'ōpelu. I'd rather eat the 'ōpelu than anything else.

MKA: It's like cracked seed the 'ōpelu.

HKA: Yeah, yeah. Even dried, I like it dried too.

MKA: I like 'em raw, even like the *akule*, like cracked seed.

HKA: Yeah, just chop it up.

MKA: I love my fish and *poi*.

HKA: Me too, I always gotta eat fish.

MKA: A couple years ago, I had cancer.

HKA: What?

MKA: I fell down with the bike, not my motorcycle, the bicycle caught me in my ribs. So, maybe about two or three weeks [after] I thought I had some broken ribs. In the middle of the night something woke me up. Next thing I know, they had to medivac me from the hospital over here to Honolulu. I'm sitting in Honolulu at Straub for four days, and the guy says, "Mitch we gotta tell you

something, you have a cancer on your kidney, and we have to remove it, so we are going to let you go home for a week or two, and you can think about it.” All right, so, I came home, next thing I know, I want to go back, get rid of it, but I had to check out all the odds, what was the move, right. So, I had to go to infusion, chemotherapy kind. So, I went to infusion and got to meet more nurses, had good fun at the hospital, they all make coffee even like now when I stop over there. “What Mitch, you need your coffee?” Yes, I like my coffee. But all the nurses I met since I had my cancer, we all have had a great time even till today.

HKA: So, what happened?

MKA: You see my texture on my body?

HKA: Yeah.

MKA: Look like I never age right?

HKA: You look good, but what happened?

MKA: So, they removed it.

HKA: And all of it was gone?

MKA: Yes, but then I had to go to dialysis so the blood can get cleaned. So, I started remedying with plants, right?

HKA: *Lā‘au lapa‘au* (Hawaiian medicine usually using *lā‘au* or plants).

MKA: I heal myself.

HKA: What did you do?

MKA: I used weeds, dandelions, it cleans the blood.

HKA: Even *aloe*, *aloe* cleans the blood too. It's a blood cleaner.

MKA: It cleans it so good that the lights stay green, no turn yellow. Everybody in the world has to go three times a week, I only go twice. So, this month because the thing doing good, they're going to knock off one more day, then I can go take vacations again.

HKA: Good for you!

MKA: It's the dandelion and the liver kit, detoxifier, that and I drink the *māmaki* tea (small native trees [*Pipturus* spp.]). Yeah so, I can make *shishi* (Japanese word meaning urine or urinate). Dialysis cannot make *shishi*. So they go, "Mitch, we're going to give you a 24-hour *shishi* cup, okay, then bring it back." I bring them back half a gallon. Mitch, now we believe you, you only have to come one day a week. So, I say, all right. So now, I'm working on one a week. So, I decided today, I'm going to take it on Wednesday.

HKA: So, where do you get your dandelions from?

MKA: I bought the dandelions from the pharmacy. I take the dandelion roots in the capsule, and I drink the dandelion tea. And it works because I started the machine, like Bruce Lee. So, I got the dialysis machine right next to me.

HKA: My mom passed away from cancer, my dad had cancer too. Then he got rid of it.

[01:17:20–01:17:40] Phone ringing.

Recording file name IA202122\_2024-07-12\_Mitchell Ka'anohelani 'Ālapa (2).MP3

HKA: I'm starting the recording again and I am still here with Mitchell 'Ālapa. So, let's get back to Hanalei.

MKA: No more interruptions.

HKA: Do you know if there are any canoe-building in Hanalei?

MKA: What?

HKA: Canoe building? No?

MKA: No.

HKA: I wanna ask you, Kamealoha mentioned, you are a big wave surfer, what kinds of waves did you surf before?

MKA: Big waves like Waimea Bay.

HKA: You guys get it out here where you guys surf at?

MKA: Out here get 125 feet [3,810 cm].

HKA: Where, Hanalei?

MKA: My son is working his way up.

HKA: In Hanalei Bay, get big waves like that?

MKA: On the outside reef.

HKA: Yours school is more on the inside, right, before the reef?

MKA: Yeah, and if there are any brave souls in my school that wanna go out there and get a slap, I'm willing to take you out, and you can go out there and get a feel for it. But we surfed with the sharks the other day. The lifeguard tried to scold me, I go "You guys know me out of mind, out of state, sharks to me are like a junkyard dog." So, I am trying to teach my people not to be scared of sharks because it is not in their intuition.

HKA: They don't like the way we taste anyway. They mistake us for some other thing.

MKA: But I still have to correct myself with the lifeguards because I don't want to make them feel like I am shining them off, yeah. Got to keep the respect. So, they like that, you know. People come see me and they going to the beach wondering why I am going surfing, and they can't. I go, see the lifeguard. Because I don't want to be the one to tell them. Because there's sharks, but I'm going in the water. So I go, "Go see the lifeguard." Because I'm responsible for all my students, not the lifeguard. The lifeguard for people. But I'm responsible for —

HKA: How come they don't make big surfing tournaments in Hanalei?

MKA: We don't want it.

HKA: I mean the traffic is bad already. Imagine, the traffic would be ridiculous.

MKA: We don't want it. Everybody can go to Honolulu.

HKA: I don't like to go to the North Shore during surfing season, there's so much traffic.

MKA: They go, wow, "Mitch too good"—we came to this decision back in the '70s, we have all those surf meets for the children in high school, and that's it. No more this big trip, because it's not worth it to pack up this place. I going get the scoldings. Me and my cousin Titus going get it. It's because they gotta go through me and him to pull this over here because we Eddie's good friend, yeah. If was say anything then Eddie knows because he's a part of us, yeah. If he says no, we say no. If he says yes, then we come to a decision, me and Titus. If we say yes, then it's all over. And they don't want them to see it all over. So, we let them have the problem in Honolulu.

[00:03:58–00:04:07] Conversation about subjects not pertaining to this interview or Hanalei redacted.

MKA: We can still find one lonely beach with waves and no more anybody dropping in and can still find a sandy beach with no one else still yet on Kaua‘i. You have got to walk to get to that nice sandy beach. And all the people my age they are getting slow to get to that nice sandy beach so the *limu kohu* (a soft seaweed (*Aspargopsis taxiformis*) nicer now ... long.

HKA: Yes —

MKA: The iodine is just perfect. The one in Hā‘ena is good, by Charo’s Restaurant, at the point.

HKA: That’s why I like Kaipāpa‘u too, I like iodine. I don’t like it when it’s almost tasteless—no more the iodine, yeah.

MKA: The iodine, I like that, and I don’t like it when people bring me *limu kohu* and they wash it in freshwater.

HKA: Me neither.

MKA: I come piss off ... take this out of here.

HKA: Especially if it doesn’t have enough iodine as it is.

MKA: I just throw it in a bucket of saltwater and shake it like this. The sand came off. No bring me the one you wash in freshwater. Even the *wāwae* (*wāwae‘iole* or rat foot is a tropical club moss [*Lycopodium cernuum*]), the rat *limu*, even that, I don’t even soak’em. I let it air dry, I eat it like that.

HKA: A lot of people soak it because when it gets dry —

MKA: I eat it with onions, tomatoes, and ‘ōpae (shrimp).



HKA: Like how they —

MKA: I still eat mountain oysters.

HKA: What do you mean?

MKA: Cow balls.

HKA: Oh, yes, Rocky Mountain Oysters. I've eaten that in California.

MKA: My niece runs the ranch over here that does all the butchering, yeah. My oldest brother's kid.  
"Mitch, we got your package." All right.

HKA: How do you make it, sauté it?

MKA: I just throw it on the grill with salt. I live by all the Filipinos, yeah. So, they ...

HKA: They like that. They eat everything except the moo in the cow.

MKA: Yeah.

HKA: They —

MKA: I like the milk guts, the best thing to do with the milk gut is boil it, then you throw it on the grill so  
it doesn't shoot all over.

[00:06:46–00:08:20] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: So, you know anything about the history of Hanalei?

MKA: No.

HKA: About the land and everything else, no? Any Menehune (a race of people; legendary small people) stories?

MKA: Yeah. Years ago, I followed the night marchers.

HKA: Where, Hanalei?

MKA: I seen the torches.

HKA: And what, did you follow them, or did you come in contact with them?

MKA: They lived in the back of my house, where I lived in Hā'ena.

HKA: They used to go from Hā'ena to Hanalei?

MKA: To Kalalau, all the way to the west.

HKA: They are big buggers, yeah.

MKA: And the Menehune pinched my wife by her toes.

HKA: Really.

MKA: Yeah. So, I know everything we grew up with in Hawai'i is for real.

HKA: For real, I believe that.

MKA: Because my *tūtū* (grandfather, grandmother) in-law saw Pele coming down the Pali tunnel.

HKA: Pele was a woman before she is who she is now. All of those deities, who we call deities, are *kūpuna* (elders, ancestors). People used to say we are praying to all these gods; no, they were our *kūpuna*. They were people, and they got deified because they got raised to that level because of the way we respected them. Because the people respected them, they got raised to that level.

MKA: So, when they are picking up Pele coming down the Pali, right. By the time they reach Kailua town, she's gone from the backseat.

[00:10:09–00:13:07] Conversation about subjects not pertaining to this interview or Hanalei redacted.

HKA: I'm going to end this interview. *Mahalo*, Mitchell.

ORAL HISTORY INTERVIEW

With

Naomi Leilani Yokotake [NLY]

July 12, 2024

Hanalei Land Company, Hanalei, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

The interview took place in Hanalei Town at Hanalei Land Company; it was in an office and there is some background noise.

Recording file name IA202122\_2024-07-12\_Naomi Leilani Yokotake.MP3

HKA: *Welina kākou* [Greetings everyone],<sup>1</sup> today is July 12 ... 2024. (Chuckle.) We are on the *mokupuni* (island) of Kauaʻi, *moku* (district) of Haleleʻa, and *ahupuaʻa* (land section usually extending from the mountain to the ocean) of Hanalei. I'm Kaumaka Anae representing International Archaeology, LLC, and we are conducting Cultural Impact Assessment interviews for the EKNA, Department of Transportation Hanalei Riverbank Stabilization project ... I am here with Aunty Naomi, and Aunty Naomi can you please say your full name?

NLY: Naomi Leilani Yokotake.

HKA: *Mahalo* (thanks). And ... do I have your permission to ... record this interview?

NLY: Yes, you do.

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<sup>1</sup> Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (<https://wehewehe.org/gsd12.85/cgi-bin/hdict?l=en>). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: *Mahalo*, before I start ... I always try to tell people ... if I seem *maha 'oi* (brazen) ... I'm not trying to be *maha 'oi*, it's not my intention ... it's just for the purpose of this interview. (Chuckles.)

NLY: No, I know ... you just have to be thorough in your questionings so you can get the appropriate answers. (Chuckles).

HKA: So, what I try to do is ... start off with *mo 'okū 'auhau* (genealogy) or *pilina*, the connection you have to this *'āina* (land). What is your connection to Hanalei or the surrounding areas?

NLY: I was born in Līhu'e, raised in Hanalei, and ... have *'ohana* (family) in Hā'ena as well as Hanalei. My grandparents on my father's side, the Yokotake grandparents were from the West Side—from Waimea and from Makaweli. And ... my grandfather belonged to a family of 13 siblings, and he was a child of immigrants from Japan. He took to the land, they developed a *poi* (the Hawaiian staff of life, usually made from cooked taro corms) factory, known as Waimea Poi for many, many years—disbanded that just recently... well, in the last ... 23 years. But—my grandfather moved to Hanalei to—cultivate taro ... the intention was to send it back to Waimea for the *poi*—the family business. But he eventually ... got into the *hui* (band, group) with all the farmers here in Hanalei, and strange as it may be ... all of the farmers ... most of the farmers that had large tracts of land and had large *lo 'i* [taro pond field] were all of Japanese descent. There were small Hawaiian farmers that were situated throughout Hanalei, but most of them were of Japanese descent.

I come from—on my mom's side is ... the Maka *'ohana* from Hā'ena .... My grandfather was Jacob Maka ... and he was also involved in raising *kalo* (taro), and they had a *lo 'i* down at Kē'ē area. And also, he had a little—tiny little home ... *poi* mill ... you know where they ....

HKA: Where is the Ke'ei area?

NLY: Kē'ē is at the end of the road.

HKA: Ke'ei ... like K-E-E-I?

NLY: No, K-E-*'okina* (glottal stop)-E.

HKA: Oh, Kē‘ē? Okay.

NLY: And ... so he was involved in making *poi* from the taro they harvested and—selling it to the people in the Hā‘ena area. So, it was *kine* (Hawaiian pidgin language meaning sort of or somewhat, and/or “whatchamacallit”) of—strange ... that came from both *kine* of *poi* making (chuckles) ... I guess it’s the roots ... yeah?

HKA: Yeah. So .... what kind of ... varieties?

NLY: Lehua usually.

HKA: Lehua usually. Yeah ....

NLY: That’s the one my grandfather chose ... that’s one of the best ones. And I used to overhear them talking—they used to be discussing which is the best and ... it was mostly in Japanese but —part pidgin, Hawaiian, Japanese, and then—English mixed in all of that. So that was what they decided to raise and then they made a *hui* (team, club, association, company), and then they would sell to Haleiwa Poi was where the Hanalei taro farmers used to send their taro to. And then it came down to my dad, and he worked the farm for a little bit, and he decided that was too much hard work. My brothers got into it because they had to work to earn their keep so to speak. So, they all got experiences in the *lo‘i*. So, we come from taro producing families ... and ... my Hā‘ena ‘ohana had musical ... talents that they would share. And my mom was one of the choir directors at the Wai‘oli Hui‘ia Church. And she succeeded my grandfather who the ... director at the church too.

HKA: And what kind of church is that?

NLY: *Kalawina* (Calvinistic), yeah.

HKA: Okay. Oh, wow. Calvinist yeah?

NLY: Yeah.

HKA: Nice.

NLY: And, ah ... they called it *Kalawina*. (clearing throat.) So, we were raised in the church. We were exposed to music at all times. Looking in retrospect, as I look back—you know it's *kine* of ... important that it was done that way because we would have lost complete touch with our roots and our language, especially.... And I was raised ... and we were raised during the time when it wasn't fashionable, it wasn't *pono* (correct, proper, moral) to speak Hawaiian ... or even ... practice your cultural practices ... So, it's really hard for me now because you get used to that ... the English speaking and it's so we're trying to regain that, and its *kine* (Hawaiian pidgin language meaning sort of or somewhat, and/or 'whatchamacallit') of like—a losing battle—because you always revert back to what you're most comfortable with.

HKA: Yeah.

NLY: But ... it's hard because you cannot practice it in the way it should be ... like our houses ... our homes is not set up that way, because the children, the grandchildren has not had that background. And it's wonderful that they started Pūnana Leo (Hawaiian language-based schools), and that more people are ... speaking the language and are being intense about keeping the culture alive and ... promoting it.

HKA: Yeah.

NLY: So ... that's what I do ... I was an elementary school teacher for about 35 years, and then I semi-retired, I guess.

HKA: Where, where were you teaching?

NLY: I taught at several places. I taught at Wilcox my first year, then I went to ... I taught at Hanalei. Went to Kalāheo, way on that side.

HKA: Wow.

NLY: And I ended up in Kīlauea.

HKA: What were you teaching?

NLY: I taught elementary school ... it was like everything, and I finally got to fourth grade. Fourth grade was Hawaiian Studies, and I figured that was where I could make the most impact ... you know ... to get the students learning. And then they had that bill in the 1980s that said, “Hawaiian Studies is supposed to be part of your grade school curriculum.” And that *kine* of ... solidified it for me, and I stayed in fourth grade. When I retired, I decided to do the *kūpuna* program (program for the elderly) which is the Hawaiian Studies program in the schools.

HKA: Yes.

NLY: I’m still doing that.

HKA: Ohhh, nice.

NLY: Oh, we just have to go day by day, year by year, right at this time. But ... it’s ... something I enjoy doing, and it’s ... pleasant to work with the children ... because I have ... I just have this feeling in my *na‘au* (gut) that I need to share this so they can have the exposure and maybe choose it to ... as part of their life ....

HKA: Yeah.

NLY: ... and go more into it. I can give them a start.

HKA: Yeah, it’s important.

NLY: You look around and see all the influences of outsiders taking over here in Hanalei .... You can never see a local.



HKA: Yeah.

NLY: You know.

HKA: Yeah.

NLY: And I look back and see all these local houses that were once—housing families that lived and worked in Hanalei or in the area ... People who went to school together ... we walked to school because ... we were living in the community.... Those people are all gone, their houses have been sold, their children are not interested in coming back .... So, it's *kine* of difficult to see it going.

HKA: Yeah.

NLY: Yeah. So, I ... live out in the Hā'ena and I like it out there, because it's quieter ... it's more open, but it's still getting to be crowded ... like here.

HKA: (Chuckle).

NLY: Hammers going ... and boom ... you know ... all kinds of stuff going on so ... I say, oh, maybe it's time to go and move on.

HKA: Do you know exactly where your '*ohana* had their *kalo* patches over here?

NLY: Over here? I think they were leasing. It was before the bridge.

HKA: [HKA showing a map to NLY.] This is where the property is ... where the project is. I don't know if you can see. I think the bridge is on this side, yeah?

NLY: Yeah. So, it's ... before the bridge. You go down that road [pointing on the map], because there are farms on that side of the bridge, and then there is the bridge, and then there is another road that goes along the river.

HKA: You want to just mark it on there?

NLY: I don't know this ....

HKA: I know it's *kine* of hard to see but ... (chuckles).

NLY: Hanalei ... Viewpoint ... which one is that? The new one or the old one? It's the one around the corner, but it's not the Refuge one, looks like the new one.

HKA: I think ... the bridge is around ... over here, yeah? This is where the thing is the ....

NLY: Okay, over here then.

HKA: Yeah. I think the bridge is right over there.

NLY: Okay.

HKA: The project is right here.

NLY: I don't know ... small kid time, so ... around here, I think.

HKA: Okay. I'll mark 'em over here. Because what I going do ... I going make a map and put ... [HKA marking the map] ... I'm going to show more or less where your family had their *lo 'i*. So that's your connection ... your genealogical connection to the area yeah?

NLY: Yes.

HKA: So, your family ... were basically caretakers of the land too yeah? Because they grew the *kalo* and ... they were taking care of the *'āina*.

NLY: For the most part ... yeah.

HKA: Do you have any *‘ohana mo‘olelo* (family stories) in the area? Stories of your family besides them raising the *kalo*, just any type of *mo‘olelo*?

NLY: Well, I remember my grandfather ... on my mom’s side when we went to Hā‘ena, he would always have horses ... couple horses ... and there would be a cow or two in the yard (chuckles).

HKA: (Chuckles.)

NLY: He had a whole ... I guess it would be more of an ... not really a *kūleana* (responsibility, right, privilege) ... I heard voices and overheard some of the *kūpuna* (elders, ancestors) speaking about ... a cousin or an uncle that used to be the *kilo* (observer, seer, stargazer, astrologer) ... for that area.

HKA: So, he used to watch.

NLY: Yup... yeah. My grandfather ... they were *lawai‘a* ... so fishermen—the Mahuiki family. They lived *mauka* (inland, towards the mountain) of where my grandfather had his property ... actually was all Mahuiki land. My grandmother was a Mahuiki

HKA: Where the *kalo* was?

NLY: In Hā‘ena.

HKA: Oh, in Hā‘ena.

NLY: So, he would have ... he was really country living, real deep country ... he would have these horses and some cattle in the yard ... and that was for milking ... the old style. They go outside, they milk the cow. Don’t drink the milk from the cow.

HKA: (Chuckles.)

NLY: Oh, it was *kine* of an eye opening because we were more considered like city kids. We weren't raised down there, we just visited.

HKA: So, when he used to *kilo* (observe, look around), he used to *kilo* for *akule* (big or goggle-eyed scad fish [*Trachurops crumenophthalmus*])?

NLY: Whatever.

HKA: Usually, they are looking for the pile, yeah.

NLY: They used to go out for what ... I know they used to catch a lot of *nenu* (chub fish, rudder, or pilot fish [*Kyphosus bigibbus*, *K. vaigiensis*])

HKA: *Nenu*. Oh.

NLY: And *kala* (surgeon fish, unicorn fish [Teuthidae]) in that area, the Makua Beach area, they call it Tunnels ... Makua Beach. But here on Hanalei side my grandparents lived way up in the valley. And ... my aunt used to tell me that my grandfather had to do five crossings, because the river goes like this [motioning with her hands].

HKA: Meanders?

NLY: He had to do five crossings before he could get down into Hanalei ... to come out of the valley and then come to Hanalei. They said, yeah, he used to carry the children on his back. My grandma was a short Japanese lady. They would walk in and out. That was their first farmhouse. They had to ... it's *kine* of isolated ... and stuck way over there ... you had to make sure you had all your provisions, and it had to be ... You couldn't be driving down there. I don't think they had a horse either ... they walked for most the most part, because I didn't hear them talking about using a horse. So that was his first house. And then later on, I think they moved further down from the ... And then had that spot where they could farm. He used to rotate crops because I remember when I was little, they used to turn the fields over and plant rice sometimes. I would have to go into the *yagura*

(Japanese word for tower) ... those little tower-like things, and sit there with my grandmother, and chase birds—pull on the strings, and make all the tin cans.

HKA: So, the birds would fly away.

NLY: Yeah. The birds would fly away and wouldn't eat the rice. And so, it was from sunrise to sunset.

HKA: What year was this?

NLY: Oh, this was in the '50s. My grandmother would pack lunch, snacks, and everything. We would climb up into this tower, and you had all the strings attached to this railing, and then every so often you would have to go yank on the string, so that birds fly away and not eat the rice. So was from daybreak to sunset.

HKA: So when would they harvest?

NLY: When it was ready. I don't know when it was ready.

HKA: Was it seasonal like certain times?

NLY: Yeah. Usually, during the summertime, I remember. They would have to thresh it and then dry it. Yeah.

HKA: How did they collect it? Inside baskets?

NLY: They had ... I think when I just got there, they just got the combine, the machine to harvest, because before that, they used to have to cut, yeah. So, you would have to dress in long sleeves and everything and go out and cut. But by the time I was born, I guess, they had machines that could go and harvest the rice and separate it—you didn't have to thresh it. Another crop my grandfather rotated the *kalo* with was cucumbers. And I used to go, oh gosh ...

HKA: And was it in the water too?

NLY: No, no, they would dry it. Dry land.

HKA: His one was in pond fields right ... was *lo'i*, right ... pond field *kine*?

NLY: Right, but they had the *mākāhā* (sluice gate or egress from an enclosure) ... so they can cut off ...  
He would raise cucumbers. It was awful because we had to wash the cucumbers. (Chuckles.)

HKA: Was it Japanese cucumbers or regular.

NLY: No, regular cucumbers, yeah. Had the big *tarai* (Japanese tubs) you would put the dirty cucumbers  
in ... I remember I was only about five or six, my grandma and my mom said, “Okay you sit over  
here, and wash the cucumbers.” (Chuckles.)

HKA: (Chuckles.)

NLY: So, I would wash the cucumbers and put them in another bin and my grandmother would grade it.  
She would grade it upon how nice they looked, and then they would ship it out. I hate those days  
because you would have to sit down and wash all the cucumbers.

HKA: You guys would have to eat cucumbers too; how would you guys prepare that?

NLY: My grandmother made Japanese style ....

HKA: Namasu (Japanese cucumber salad).

NLY: Namasu. And what else ... Yeah, most of it they shipped out. Because it was a close-knit  
community, everybody shared, yeah. We shared ....

HKA: I bet you guys can trade too yeah ... with the fish?

NLY: Oh, yeah.

HKA: Barter, that's nice.

NLY: *Hukilau* (a fishing practice using a seine net by several to many people pulling the net) was always ...

HKA: You guys used to go *hukilau*?

NLY: ... the activity of the day.

HKA: Down where?

NLY: Hanalei Bay.

HKA: Hanalei Bay.

NLY: Yeah.

HKA: Oh wow ....

NLY: Hanalei Bay.

HKA: So, you guys *hukilau* down there, and what did you guys used to get?

NLY: The fish.

HKA: What kind of fish?

NLY: *Akule* ... sometimes 'ōpelu (mackerel scad [*Decapterus pinnulatus* and *D. Maraudsi*]). Yeah.

HKA: ‘*Ōpelu*. Wow ... all the schools, yeah?

NLY: Yeah. Schools, huge schools. So, every, every ... during the summertime it was so prolific you know ... the fish kept coming in and coming in.

HKA: And this was during the ’50s too?

NLY: Ah ... yeah, in the ’50s ... I was a young child, and you know ... your mom says you don’t go to the beach unless you finish your chores, you finish your choses, then you can go to the beach; and then you can go to this beach, you cannot go to that beach. But *hukilau* days ... *hukilau*, you can go anywhere—just go and *huki* (pull [the net]), because you need to bring home fish. (Chuckles.)

HKA: Yeah ... that’s pretty cool

NLY: Yeah. So, you get your *mahele* (portion [of fish]), you go home, and everything is fine. You don’t get *lickens* (Hawaiian Pidgin for spankings or beatings) because you wet, you don’t get *lickens* ....

HKA: You bring home fish, yeah. (Chuckles).

NLY: You are bringing home your fish ... in your shirt ... (chuckles) ... because no more plastic bags, yeah, those days.

HKA: Yeah.

NLY: Yeah. So, you ... take yourself over there, and if you get your fish, you put ‘em in your shirt, and you come home. (Chuckles).

HKA: You guys had *limu*, like any type of *limu* in Hanalei?

NLY: Not in the bay ... you would have to go out. For *limu*, we would probably go out to Hā‘ena area.



HKA: And what kind of *limu*?

NLY: *Limu kohu* (small seaweed [*Asparagopsis taxiformis*]) usually ....

HKA: *Limu kohu* ... oooh.

NLY: *Limu kohu*.

HKA: That's what that get inside, *limu kohu* [referring to the raw fish she prepared and gave to NLY as one of the *makana* or gifts].

NLY: The Kanahā area the Naue area ... yeah, that's where they would go for *limu kohu*.

HKA: You know out here; you know anything about people catching *he'e* (octopus [*Polypus* sp.]?)

NLY: Not so much here, but Wanini (old name for 'Anini, Kaua'i) and Hā'ena.

HKA: Okay, yeah.

NLY: Not so much here in Hanalei. I think.

HKA: When you were young ... back in the '50s, you used to see '*ōpae* (shrimp) ... '*o'opu* (goby fish; general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae)?

NLY: Oh yeah. '*O'opu*, a lot.

HKA: Plenty '*o'opu*.

NLY: Yeah, and they used to net it, yeah.

HKA: Yeah.

NLY: They were able to net it and they would go around, and sell it.

HKA: How they used to make 'em, prepare 'em?

NLY: Mostly *lāwalu* (fish or meat wrapped in ti leaves for cooking) style as far as I remember.

HKA: Inside the ti leaf?

NLY: Yeah.

HKA: And cook 'em?

NLY: Yeah.

HKA: Cook 'em in the *imu* (underground oven) or inside on top the stove?

NLY: On top of the stove.

HKA: With the ti leaf.

NLY: Yeah, the *lāwalu*. Hanalei River, Wainiha River, not so much Lumaha'i.

HKA: You know if get 'o 'opu now? I didn't even ask them if had 'o 'opu [HKA referring to her previous interview with the Sheehans].

NLY: Maybe ... every time when get big rain in August or September, you see all the Filipinos on banks. (Chuckles).

HKA: For 'o 'opu? Also got tilapia, yeah, now.

NLY: Yeah.

HKA: Got to .... invasive species catch.

NLY: Invasive species ... But what are you going to do with the tilapia after you catch it?

HKA: Eat 'em

NLY: Nnnn.

HKA: (Chuckles).

NLY: After you know the history, you won't like to eat 'em (chuckles).

HKA: (Chuckles). No, but it must be clean inside here ... inside this river.

NLY: Oh, I don't know anymore. Used to be but not anymore.

HKA: Yeah.

NLY: Too many things happening up stream ... you know on the land.

HKA: What is happening up stream?

NLY: Plenty ... more people, so more dogs, more pets, and more ...

HKA: More people already ...

NLY: ,, 'ōpala (trash) ... unseen things, you know that are being washed into the river.

HKA: ... wash to the river ... you might have fertilizers and stuff.

NLY: So, whereas you would be ... comfortable just wading through the river or doing stuff in the river,

HKA: Any leptospirosis? You guys have any cases of that?

NLY: Some, a few.

HKA: Yeah. Ah, poor thing.

NLY: Whenever it floods, that section of the road gets eroded, yeah.

HKA: Aunty, you know 'ōlelo no 'eau, any wise saying within your family? No need be Hawaiian, can be English too ... no need be from Aunty Kawena's book?

NLY: I don't know ... wise sayings, my mom used to always tell us, church first, because we always wanted to do other activities, right? And she would say, "Well you got to do your church work first before you can go and do this." So, we all would hurry up and do our things, and we always had ... well, not always, but whenever we could, my mom would call us and say, "Okay time for 'ohana."

HKA: Oh, nice.

NLY: Yeah. So, we would do 'ohana. Have you done 'ohana in your ...?

HKA: We have family home evenings.

NLY: Yes ... okay, similar to that. So, you all sit around in the living area, and then she says, let's sing this song. So, we sing the hymn, and then she says, "Okay everybody tells us about your day," and then you need to ... share a memory verse.

HKA: Yeah.

NLY: So, we all do that. Of course, we rush because we like do the easy ones first right before the other person ....

HKA: (Chuckles.) Steal your verse.

NLY: (Chuckles) ... steal your memory verse. But that's what we remember most, to beat each other out. And then we would do a *pule* (prayer), and then we would sing, and then *pau* (finished, ended, through).

HKA: Nice. So, you guys would catch Samoan crab, mud crab inside the river?

NLY: Inside the river, yeah.

HKA: You guys used to eat 'em?

NLY: Oh yeah.

HKA: Big kind?

NLY: Yeah, big kind.

HKA: My gosh, because the pinches look like human teeth, yeah.

NLY: Crabbing, 'o 'opu fishing, *hukilau*, and my grandmother used to go hook 'oama (young of *weke* [goatfish] or Mullidae), she loved to hook 'oama off the pier.

HKA: So must get plenty of *weke* too yeah over here yeah ....

NLY: Oh, I don't know.

HKA: ... because the '*oama* come to the *weke* yeah?

NLY: Yeah, I know but ... I don't know ...

HKA: Oh, if get anymore now.

NLY: ... anymore now survived (chuckles).

HKA: Maybe then had, yeah ... plenty *weke*.

NLY: Certain spots, yeah, certain spots get '*oama*.

HKA: Nice. Oh yeah, right now they should be in the '*oama* ...

NLY: Yeah.

HKA: ... at this time. So over here no more *pa'akai* (salt) gathering yeah?

NLY: No, not on this side, it rains too much (chuckles).

HKA: Yeah ... yeah.

NLY: But get plenty *lo'i*.

HKA: Yeah ... yeah ... plenty *lo'i*. You know when you guys were young, did you guys go to the *loko i'a* (fishpond) over here?

NLY: Nnn ... no. We didn't go to the *loko i'a*.

HKA: You guys get plenty fish all around ... you know what I mean.

NLY: We used to do ocean mostly.

HKA: Yeah.

NLY: Not too much fresh water. My brothers and his friends ... sometimes ... they go surfing ... but sometimes they bring home *kala* or they bring home *uhu* (parrot fish [*Scarus perspicillatus*]), bring home ... something, and so that would be the meal for the day. And sometimes ... to eat *kala* in so many ways and so many times. My sister said, I am an adult, and I don't need to eat fish anymore, I am not eating any fish. (Chuckles.)

HKA: Oh, I love fish (chuckles).

NLY: She goes, if it's the fish, no thank you. I had my fill of fish.

HKA: And so, you dance *hula* (Hawaiian dance, dancer), you teach *hula*, and you have a *hālau* (hula school)?

NLY: Yes.

HKA: And so, you practice inside the valley.

NLY: I practice at Wai'oli Hui 'Ia Church Hall.

HKA: Nice.

NLY: We just had *hula* yesterday.

HKA: Oh, okay. You do *‘auana* (modern Hawaiian dance) and *kahiko* (ancient Hawaiian dance)?

NLY: Yes.

HKA: Both?

NLY: Both. I try to keep ... because that is the whole point of me being a teacher. I studied under a lot of people, but when I got involved with Auntie Hoakalei Kamau‘u, with the State Foundation on Cultural Arts ... she said I’m teaching you for free, but your *kūleana* is that you go out, and you teach what I taught you to as many as want to learn. So, I’m still doing that. (Chuckles.) So, I started off with *keiki* (children) ... I had a whole bunch of *keiki* ... then young adults, and then adults ... now I’m only stuck with adults.

HKA: So, you practice *‘oli* (chant) too, of course yeah.

NLY: Mmmhmm. I do that all in the schools also.

HKA: Yeah, and how about ... you guys do *ho‘okupu* (ceremonial gift giving as a sign of respect and honor)?

NLY: Well ... this is where it gets *kine* of slippery and sticky ... I had a *kupuna* ... I not sure if you ... heard of Grandma Rachel Mahuiki? She was ... very well known in ... Christian circles. And I know when I was a young girl, my mom used to go to the *kūpuna* and they used to call it *makua*—they would study the Bible and they would pray, and they would have discussions, and this was one of ways for them to deal with conflict, and with ... all kinds of *pilikia* (trouble, problem) that might come up in the family or ... in the community. And so ... when I went into *hula* with Auntie Hoakalei, she wasn’t really strict about doing all the previous protocols ... like a *kuahu* (altar) and doing all those other things. She just wanted us to learn the dances and the chants so we could go out and teach it to keep the *hula* line ...

HKA: Perpetuated.



NLY: ... perpetuated and to keep it the same, traditional. People can do all these other ways, but this is the tradition that you always can come back to this—the simple, tried and true. So when they started saying, “Okay well, you got to get back and do your roots, and you got to do this, and you got to do your *kuahu*, and you got to do your Lono (one of the major deity and/or venerated kupuna) and your Laka (goddess of *hula* and/or venerated *kupuna*)”—that made me *kine* of *pū‘iwa* (startled, frightened, surprised) little bit. And then knowing the history of the *hula* and what it was for ... it was to praise the deities ... to bring recognition to the royalty, and all that stuff, its *kine* of clashed, yeah, so ... I had to have a long discussion ... I asked my mom, and she said ... why don’t you go and ask Grandma Rachel. And I finally ... she didn’t give me the answers ... I finally figured it out for myself, and I said, well ... I think the intention is what is important. You know?

HKA: Yeah.

NLY: You can do the *hula*, you can do Christian *hula*, you can do your traditional *hula*, but your intention has to be such that it is not praising or ... lifting up the gods. And so, I finally come to that conclusion and I’m comfortable in doing what I’m doing right now.

HKA: Nice.

NLY: So, it’s ... it was a really hard time for me when we were ... doing *kahiko* especially, but it was a way to ... show how ... things were at that time, because this is where all our history is located in all the *mele* (song) ... the *‘oli* (chant) and the *hula*. But ... yeah so ... it’s come full circle and ... dealt with it.

HKA: That’s nice. You know any *mo‘olelo* like ... you know what, we are almost out of time ... it’s 10:55 ... I’ll close the interview right now ... thank you Aunty.

NLY: You’re welcome.

HKA: *Mahalo nui*. (Thank [you] very much).

## ORAL HISTORY INTERVIEW

With

Alice Patricia “Patsy” Kuaihelani Wilcox Sheehan [APKS]  
Michael Keola Sheehan [MKS]  
Juliette “Lia” Kiamanu Sheehan [JKS]

July 12, 2024

Hanalei Land Company, Hanalei, Kaua‘i

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name IA202122\_2024-07-12\_Sheehans.MP3

JKS is live on the Zoom app located on APKS laptop computer.

HKA: *Welina kākou* (Greetings everyone)<sup>1</sup>, today is July 12, 2024, and we are on the *mokupuni* (island) of Kaua‘i, in the *moku* (district) of Halele‘a ... in the *ahupua‘a* (land division usually extending from the mountain to the sea) of Hanalei. I’m Kaumaka Anae representing International Archaeology, LLC (IA), and we are conducting cultural assessment interviews for the EKNA Department of Transportation (DOT) Hanalei Riverbank Stabilization project. And I am here with Lia, Keola, and Aunt Patsy Sheehan. And, Aunt Patsy, can you say your full name?

APKS: Alice Patricia Kuaihelani Sheehan.

HKA: *Mahalo* (thanks), and Lia. And, Keola, can you say your full name?

MKS: Michael Keola Sheehan.

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<sup>1</sup> Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (<https://wehewehe.org/gsd12.85/cgi-bin/hdict?l=en>). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: Mahalo, and, Lia, can you say your full name?

JKS: Sure. So legally, Juliette Kulamanu Sheehan. So, Lia's a nickname completely.

HKA: *Mahalo nui* (many thanks). And do I have your permission to record this interview?

APKS/MKS/JKS: Yes.

HKA: *Mahalo*. Before we start, I would like to say, if I seem *maha'oi* (brazen), it is just part of the nature of this interview. I'm not trying to be intentionally *maha'oi*. So, let's begin our interview. First, let's begin with *mo'okū'auhau* (genealogy) or *pilina*, your connection to 'āina (land) or your connection to this place in Hanalei.

APKS: We go back to my great grandfather (Albert Spencer Wilcox [May 24, 1844–July 7, 1919])<sup>2</sup> was born in Hilo but ended up living in Hanalei at Wai'oli. And he was part of the Wilcox family, and they were missionaries ended up being stationed here. So, he built the house that we still have. And so, I think Keola is a fifth generation, and we are still here.

HKA: So, was your *kūpuna* (ancestors, elders) *konohiki* (headman of an ahupua'a) of this 'āina probably?

APKS: I think that Albert, which is the great grandfather, purchased Princeville, and his father had land from the mission ... the commission, when they said, we no longer are going to support you anymore. So, they lived behind the church, which was not the church that is there now. And there were taro fields behind that, where they worked. And I think I can't say that they owned it, but everybody worked it. Over here there were Kānoa Ponds a long time ago. And it's been disputed where, which ones, they are all Kānoa Ponds, so Albert purchased the pond, and the river had a tributary and that has become a pond because it just blocked up. And they had made a road to the end of the road and that stopped the tributary from going out, so that creates ponds. So that was his

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<sup>2</sup> Albert Spencer Wilcox is the son of Abner (1808–1869) Wilcox and Lucy Eliza (Hart) Wilcox (1814–1869). They were the eighth company of missionaries to Hawai'i for the ABCFM (American Board of Commissioners for Foreign Missions). Retrieved from Ho'okuleana LLC (<https://imagesofoldhawaii.com/kauikeolani/>) and accessed August 15, 2024.

time, so I'm not sure what the Kānoa Ponds are because that was before his time. So, he bought it from Rooke and A. S. Nu'uanu who was here before.

HKA: Rooke, is that the parent of Emma [referring to Queen Emma who was married to Alexander Liholiho, Kamehameha IV]?

APKS: I think so.

HKA: Emmalani, Queen Emma.

APKS: Yes.

HKA: Oh wow.

JKS: Mom, what about Ethel?

APKS: Ethel?

JKS: Kuaihelani, what is her ... is she born on Kaua'i, I don't know?

APKS: No, Ethel was ... Ethel's mother was Emma, and A. S. Wilcox lived here, married a second time, and married Emma Napoleon,<sup>3</sup> who was from O'ahu and Maui. And Emma had already had three children, four children, and A. S. ...

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<sup>3</sup> Emma Kauikeōlani Wilcox was born Emma Kauikeōlani Napoleon (November 25, 1851–October 22, 1931) to Pamahoa and Temanihi Napoleon. She first married Samuel Mahelona (July 7, 1861–May 24, 1892) on June 2, 1882, and he passed away at an early age. They had four children: Samuel Hooker Kaleo'okalani Mahelona (1884–October 20, 1912), Ethel Kulamanu Mahelona (February 2, 1887–September 19, 1954), Sunbeam Cushman Nehenuiokalani Mahelona (April 14, 1888–August 16, 1889), and Allen Clesson Kauluheimalama Mahelona (1891–unknown). Retrieved from Ho'okuleana LLC (<https://imagesofoldhawaii.com/kauikeolani/>) and accessed August 15, 2024.

MKS: Who is Mahelona, Sam Mahelona?

JKS: Mahelona, so we're ...

APKS: Yes, because she married Mahelona, he died, and this is the second marriage for both, but it was her children that were adopted by A. S. So, Emma had Ethel, Allen, Samuel, and Cushman. Cushman died. So now, Ethel came to live in Hanalei with her mother who married A. S. Wilcox who was living here, and she met A. S. Wilcox's cousin, no—

APKS/MKS: Nephew.

APKS: A. S. Wilcox's brother's son.

MKS: Gaylord, G. P.

APKS: Gaylord. And so, Ethel was already adopted by Wilcox. And Gaylord and Ethel got together, and so, they married. And in theory they were first cousins, but not really ...

MKS: So, the Hawaiian line is Napoleon-Mahelona.

APKS: Right.

MKS: Right.

\*\*\*\*\*Phone ringing\*\*\*\*\*

APKS: That is me, sorry.

HKA: That's okay we'll just put this on hold ... we'll just let it go.

[05:34–05:44] Pause while APKS takes call redacted.

APKS: Anyway ...

MKS: But they probably weren't necessarily *konohiki*, in that official sense, right. Just ...

HKA: But they were caretakers.

MKS: They were caretakers. Yeah.

APKS: Yeah.

HKA: I heard you [referring to MKS] were familiar with the Kānoa Ponds and another pond, there's two of them, right?

MKS: Well, there's supposedly three of them. Yeah, and in our research that we had to do, Cultural Surveys did, right? Remember when we were ...

APKS: Mmhm. Yeah, we have all that.

MKS: Kānoa was the governor of the area, so he was the official *konohiki*, I guess, for that window in time. And so, I guess loosely, all three of those ponds became known as the ponds of Kānoa because of where his residence was. He lived near the ponds, and it became the Kānoa Ponds or the Ponds of Kānoa. So, the main pond that we call on the map, that's the big body of water, we call Kauikeōlani, Loko Kauikeōlani (Kauikeōlani Pond) because it's adjacent to the old family house. And the other two have morphed into active fishponds. They've become overgrown and marshier. So, whatever the original one was, are not the ones that exist now under the names that we know it.

APKS: Bill Kikuchi did research, and he took pictures, and labeled the ponds, the ponds of Kānoa. But he took ... he said, this is a Kānoa Pond, and by that time the ponds ... they had been in taro, then went to rice ... after rice, the lessees of those pieces, were leasing the land from Kānoa. And then, when Albert got it, they were leasing it from Albert. But when they left and when rice went out, taro came back right. And I don't know the timetable, but after that the land was fallow. So, what

we considered the Kānoa Pond, a 14-acre [0.06 km sq.] marsh that's completely grown over, you'd never know it was a pond anymore. So ... but he took a picture of another pond, and called it one of the ponds of Kānoa, but his picture did not match his verbal explanation.

MKS: The original description [referring to Kikuchi's photo and description not matching].

APKS: Then when we did it was—well this picture says this, and this ... And I said that pond is this pond, so are you calling this one a Kānoa Pond too just for the hell of it? And so, finally we—in my lifetime, the middle pond—I heard from my grandfather made, so that couldn't have been a Kānoa Pond. Was it or wasn't it—it had a spill way it was ...

MKS: Like a freshwater pond, right?

APKS: Yeah, it was a freshwater pond.

MKS: It was fed by the *'auwai* (canal, ditch) from the taro fields?

APKS: From the taro patches.

MKS: So, it didn't have that saltwater feed that a lot of fishponds do, that ebb and flow. It was a one-way freshwater that they put ... they grew bass in.

APKS: Right.

MKS: He raised bass in it. And then that spillway went into the other pond which led to the river. Traditionally, a one-way freshwater pond.

APKS: It went from the mountain to the sea but when Hanalei started to be developed then ...

MKS: The *'auwai* got blocked and diverted.

APKS: Yeah. People cut the trees and filled up the ditch and therefore, they were no water coming in so ...

MKS: Yeah.

APKS: It just ... overgrew so, as much as you say this should be conservation or whatever. It's at the ponds you can see the stage of what happens when you don't take care. It just becomes ...

MKS: Yeah. You got to *mālama* (take care of, maintain, protect, preserve) or it just becomes a swamp.

APKS: Yeah, it just becomes swamp. So ... the one pond ...

MKS: We did a restoration on one pond, the six acres [0.02 km squared], we call now Loko Kauikeōlani, which Buddy Keala came and helped us do.

HKA: Oh yes, I know Uncle Buddy.

MKS: He was on Moloka'i and came over, and he was just like ... six years ... that was a lot of restoration ... and he helped us do it. It looks ... pretty and is healthy. It's a more traditional fishpond in a sense of what most people think is a pond. And other areas they labeled as Kānoa Pond is in various states of decay and swamp ... neglect I should say, not decay. Neglect, you know. Yeah.

APKS: Too many permit regulations to just clean a pond. You almost have to have ...

MKS: That's a whole another ...

APKS: ... a business and be ready... We had to get all these yellow turbidity ...

MKS: Curtains ...

APKS: ... things, and oh, my Lord.



MKS: ... curtains and all that. Things we could do without, I'm sure.

HKA: I know exactly what you guys are talking about because we had all of that in Punalu'u. We just did a Punalu'u Stream Restoration on Kamehameha Schools property. We had all that stuff.

MKS: Mmmhmm. The silt curtains, all that stuff, right? The turbidity curtains, the floating booms or whatever.

HKA: Yeah.

MKS: The yellow booms.

HKA: Yeah, yeah. And GBI [Goodfellow Brothers, Inc.] did the job. I was on that job. I was an archaeologist on that job. I know how that is.

MKS: A lot of best management practices [BMP] to deal with water, right?

HKA: Yes. Every time, they would have to stop construction because they out have to go and do that—the BMPs.

MKS: We'd have to do it in 100-feet [30.48 m] sections, so Buddy would have to, we would have to boom out a 100 feet [30.48 m], then he would do his little like silt removal, and take ...

APKS: Almost by hand that poor guy.

MKS: Yeah, it was. He was almost up to his chest in water like just a big trash pump, just sucking, vacuuming silt. Just the muck out of it, trying to get sand, hard clean sand, and then push it all to the side, and then take a picture, do whatever his little water quality is, write it down, and move it over submit it to the Department of Health clean water ... it was brutal.

AKPS: Yeah, it was.

MKS: Poor guy, he was in the water like for eight hours a day. But he loved it, well, I wouldn't say that he loved it, but he was committed to it. He was into it right, so.

APKS: Yeah, but I think that kind of data hadn't ... you know how deep is deep, and where is the sand. The sand level went kind of like this—we had the tilapia coming in from the river, and they were eating the bank. The bank was falling in, but that is where they nested, and they would go and eat the mullet *pua* (baby mullet). And they were winning the battle, so we were closing up all that...

MKS: It was getting shallower and wider over time, and there would be like because there was no depth ... temperature gradient so it would get very warm, and we would get algae blooms—all the fish would die.

APKS: All the *ulua* (game fish; certain species of crevalle, jack, or pompano) would die.

MKS: All the *ulua* would float.

HKA: So, get plenty of *ulua* in that pond?

APKS: Well, there was.

MKS: Yeah.

APKS: We had two ...

MKS: Well, there is again. Now it's healthy because it's got depth.

APKS: But it hasn't gotten to the *ulua*, 60-pound, 70-pound size.

MKS: Yeah, it's still 10 and under. Yeah, but anyway, it was a lot of work.

HKA: Wow, that's so neat.

APKS: We went to see what he was doing, Lia and I ... KS had him in Hale'iwa.

HKA: Yes, I was just going to say, at Loko Ea.

APKS/MKS: Yeah.

HKA: That's where I met Uncle Buddy, at Loko Ea.

AKPS: He was there, but that one is much closer to the water. And he had KS kids—one bunch was eating lunch, while the other ones were pulling rocks over here and something, he whistles, and they rotate. (Laughing.)

HKA: I did some work over there at Loko Ea.

APKS: That was fun, that was really fun, and he, oh, now I don't think I'm going back to Kaua'i.

MKS: Plenty of work over there.

JKS: He turned and said, all you can see over there, we haven't even touched yet, right.

MKS: That's a big pond right.

APKS: Yeah.

MKS: Bigger than ours, that's a big one.

APKS: Yeah.

MKS: Compared to ours yeah, that's a big one, a lot of mangroves, and stuff, there's all sorts of stuff there.

HKA: They got Loko Ea and the original is ‘Uko‘a. ‘Uko‘a was there before Loko Ea.

APKS/MKS: Mmhmm.

HKA: Now they are trying to expand it into—‘Uko‘a. They had a family taking care of that at one time trying to raise the fish during the Contact Era, the Sato Family was taking care of that long time ago.

MKS: Wow. That’s cool.

HKA: Yeah.

APKS: Amazing, no it’s amazing, and ...

HKA: And it was shallow too, so they had to dredge.

APKS: It’s not that people don’t want to do it, it’s just that the regulations bog you down.

MKS: Time consuming.

HKA: Yes.

APKS: Time is money, time is money, and you say, wait I been doing this for six years, I can’t do this anymore.

MKS: Especially I got to do it all by hand. Like Kipi, I’m sure if the *kanaks* (slang for *kanaka* [man, person, Hawaiian]) had an excavator back in the day, they probably would have used it, right?

HKA: Kipi who?

MKS: Kipi Dunbar.

HKA: Oh, I thought you were talking about Kipi Akana. (Laughing.)

MKS: No. From Mokoka'i. He was trying to do his on Moloka'i but he had them stack the rocks by hand. If I had an excavator, I could just pick it up and I could go 100 times faster. Oh, got to do it by hand, yeah.

HKA: That's why you know Paepae O He'eia, what she did was, she had 1,000 people. They had to fix a wall; the wall was breaking out. She's my cousin, but she had to fix the wall, and she had 1,000 people come in, and they were carrying the rocks through a line, like the old style ...

MKS: Hand off, 'em out, hand ...

APKS: Yeah. Hard to raise your hand and say, "Could I have 500 of you today?"

HKA: What's his name, Kaina Makua, he probably can bring the people. (Laughing.)

JKS: That's Hi'ilei, Hi'ilei is your cousin.

HKA: Yes. Hi'ilei is my cousin on my dad's side.

JKS: Yeah, she's been there for ...

APKS: Well, Hal Hammatt had to do studies for the Pu'u Poa Marsh *loko i'a* (fishpond) there. And he found a lot of things that hadn't been written down before, and especially the wall that was 10 years before very visible, and now the *kamani* (a large tree [Calophyllum]) trees are growing up, and it was breaking. You know *kamani* trees they get huge. And so, he had a community workday, and a whole (chuckles) bunch of us went to work more than once, a human picking these things out, take you forever. And then, he worked on it for quite a while, and in that time the hotel changed hands. So, then the new owners said, well I don't know if I'm going to give it to you or not, and then he says, I will give it to you, and you can do it all, the whole thing yourself. Thanks a lot, you know, thanks a lot.

MKS: (Chuckles.)

HKA: That's a lot of work.

APKS: It didn't last long. It was huge, it needed a little more funds and time and ... so it's overgrown, completely overgrown. Sorry, we got off the subject.

HKA: No, that's okay.

APKS: (Chuckles.)

JKS: We participate in KUA's (an organization called Kua'āina Ulu 'Auamo) *loko i'a* (fishpond) *hui* (organization, association) anyways ... So, we've gotten to ... Hi'ilei there, Kevin Chang. I think that whole network is ... I'm hoping to tap into them when we are ready to do more restoration. But I think it's amazing to hear all the stories of folks going, you know, restoration work around the islands. Yeah, definitely a committed group.

HKA: So Hi'ilei, Stacy's group are part of Kamehameha Schools 'Āina Ulu group, and so is Loko Ea in Haleleiwa. So, we used to all meet on the different islands and go to each other's sites because—through Kamehameha Schools 'Āina Ulu. We would have quarterly meetings and hear about what each group is doing because it is all Kamehameha School's land. I was part of, teaching at UH and we do work in Haleiwa at the *moku* of Waialua on Oahu in collaboration with UH and Kamehameha Schools. So, we did these stories, collected these stories and put them on the ESRI/ArcGIS platform. So, we have our stories for the North Shore Field School. We did Aunty Diane at Loko Ea, and she used to live over there. She had amazing stories.

MKS: Amazing stories about history I'm sure, wow.

HKA: I used to meet with them before. So, you are familiar with another *loko i'a*, there's another one, right?

MKS: In Hanalei? Um ... not that I'm aware of.

HKA: No, it's the Kauikeōlani ... and the Kānoa.

MKS: Oh, you're thinking of the Wongs'?

HKA: No, Kamealoha told me, I think he meant the Kānoa and the ...

MKS: Of the ponds you mean.

HKA: Yeah.

MKS: Okay, back to our original discussion (chuckles) about which was the actual pond right?

HKA: Yeah.

MKS: 'Cause it was the ponds of Kanoa, but which of the three was the actual Kānoa Pond right? The labels were getting switched around.

APKS: And they ... because Bill Kikuchi in his explanation was not showing ... what he said was not the pond he was showed, so we were consolidating. So, we've got the Ponds of Kānoa are the two that need work. And the one that is behind the big house is Kauikeōlani.

MKS: Yeah.

HKA: Nice. Can you mark it on here? [Showing map.]

MKS: Yeah.

HKA: It's *kine* (Hawaiian Pidgin language for sort of, somewhat, and/or "whatchamacallit") of hard to do.

MKS: Absolutely. That's it right there. You see that big.

HKA: I'll get out my pen.

MKS: Okay.

HKA: You can mark that please.

JKS: But it's all the same waterway, right?

APKS: Not anymore. No, the middle pond was freshwater, the two end ponds...

MKS: You want me to circle it?

HKA: Yes, circle it and then...

APKS: Draw an arrow or something.

HKA: Yeah.

MKS: Okay.

APKS: The other two ponds related to the magic box and the ebb and flow of the river.

MKS: So, it goes over here as you can see. So, you see this long skinny body of water ...

HKA: Yes.

MKS: We call Loko Kauikeōlani. That is the one Buddy did the restoration on.

HKA: Yeah.



MKS: [Indicating point on map] There is this horseshoe of grass, and then there is this long piece here which all three of those were referenced as Kānoa Pond.

HKA: So, all of this ...

MKS: The Ponds of Kānoa.

HKA: And the Pond of Kauikeōlani.

MKS: Yeah, Kauikeōlani.

[21:23–21:55] Section regarding the name of the fishpond, Kauikeōlani, omitted to avoid confusion. HKA takes photo of a photographic map on the wall.

APKS: [Referring to the ponds] So it's a big one, Kānoa Pond is the big one, that is ... we call the gold island because it is now land. But the *auwai*[s] (canal, ditch) came in, went through here, went across here ... This ... was a little tributary, a tributary off of Hanalei River but it didn't go anywhere, it just was a tributary, and it must have just seeped out. There is no road here, so when the road went in, this became landlocked. So, Albert Rooke took this part of it from his grant and made a pond.

MKS: So that's Loko Kauikeōlani now, that's Loko Kauikeōlani now where that little finger is, and where that horseshoe is ...

HKA: So that's the Ponds of Kānoa, yeah.

MKS: The Ponds of Kānoa is this and now ... this is broken off here, so this is another one, and this is one we call Kauikeōlani.

APKS: To me, this which is now still Kauikeōlani ... this part we broke it off because this was his manmade pond ...

MKS: That's the freshwater pond.

APKS: ... and it had access to the river, but he made it come in, fill, and go out. So, it came in this way, it filled, and he made it higher so that there was a spillway into the river. The river could not do this anymore.

MKS: It could not ebb and flow, so it didn't have that brackish mix, right? It was a purely—freshwater pond that would ... when it got full, it flowed into the river. But now this one has an inlet that at high tide pushes saltwater, and at low tide it flushes out.

APKS: So, this became a pond. What they did was they ... this was not built, so this water came in, it came in this way, and it filled this pond, and this pond emptied out. And then this ... I guess it had ... it went out too, but it was always freshwater really, because that's how the taro and rice would grow, they needed the freshwater.

MKS: Yeah, so our office is like right about here. And so this was the government road and they put in ... Weke Road, and all along the beach. This map is 1893. When did they have the road, in the '30s?

HKA: Weke Road is right over here.

MKS: Yeah, exactly. It comes down. Then Aku Road kind of splits.

HKA: The names of all the fishes, yeah? No wonder get one Anae too yeah?

MKS: Yeah, all the names, Weke, Anae, Aku. Right, that's all the fish names are all of the street names yeah.

HKA: Wow, that's pretty cool.

APKS: So, this is a...

MKS: Yeah. Sorry Lia. (Chuckles.) In the blind.

JKS: That's okay, I can hear.

APKS: ... the churches. This is the park, there is a big park when you go to Hā'ena. So, this is where the Wilcoxes had the mission houses. Anyway, they were part of all of this originally. But I know we have lease documents to Chinese rice growers—I don't know maybe there was a war or something and everybody got *huhū* (angry) with everybody.

MKS: (Chuckles.)

APKS: They didn't grow rice anymore, but California had rice.

MKS: Or they moved to California right.

HKA: Yeah, yeah, it's like sugar too, right?

MKS: Yeah.

APKS: Yeah, yeah. So anyway, we have this old map, and—I have old pictures from Helen. Helen Davis was a Sanborn, but she passed away.

HKA: The Sanborn maps?

APKS: Yeah. And they have a picture of the mill when it was on this side. The mill for the cane and everything was on this side, and there wasn't a bridge yet, but you could see the little house that is now all the bamboo and everything. And then your project is like right here.

MKS: Yeah, where it's going to go.

APKS: There's another part right here because we paddle a lot and this part of the road is so undermined, and it's right before Dolphin [the Hanalei Dolphin Restaurant] so it's just right around here anyway—it will all come back...

MKS; Job security for the state.

HKA: (Chuckles.) Can I take a fast picture of this?

MKS: No problem, please take your time.

HKA: I think I have this map.

MKS: Do you?

APKS: Yeah, you should.

[26:58–27:09] Omitted this section we are walking back to our seats and settling in.

HKA: Oh, you guys have this thing too? [Referring to many 8 x 11 copies running parallel across the of snapshot along the sidewalks of Hanalei town forming a map.]

MKS: I was on the Community Association, and we have been working on a walking path for a long, long, long time, and the State's gonna finally going to do it, they are going to start at the end of the month.

HKA: Oh, nice.

MKS: Yeah. So, we finally got some traction on that, so interestingly enough Larry Dill, who's the island DOT (Department of Transportation) guy, he got a lot of projects coming on down in Hanalei across the bridge. He's doing the walkway, he's doing your deal, they're going to start when they

are done with the hill down here, they are going to move down in September to start the Waikoko Hill Stabilization. But anyway, this is just a picture we were trying to ...

APKS: This is more today instead of yesterday. This is the Kānoa Pond, I mean Kauikeōlani. This is Kauikēolani Pond goes like this.

HKA: And this is the horseshoe.

APKS: Our gold island is completely silted in and this right here is another pond that we have stopped the—spillway because all of these houses cut their—and put it in the...

MKS: All of their washers and dryers.

APKS: It's the stages of not being able to clean it ...

MKS: But those are the Ponds of Kānoa.

HKA: Wow. So funny because in Hau'ula we got some Kānoa.

MKS: I'm sure they—gotta be related.

APKS: Well, I'm just saying ... the colored pictures are...

HKA: Wow, look at that.

APKS: (Laughter.)

HKA: You guys don't mind me taking these pictures, yeah?

MKS: No, not at all. And so that's that one, and there's the horseshoe, and here's Kānoa Ponds over here.

HKA: Nice.

MKS: Yeah, yeah, yeah—

APKS: So, we're trying to make ... the gold island, so it's land—get it out of conservation so we can do something ag with it, and it's just like okay.

MKS: Ag—out of conservation.

APKS: Hah.

MKS: You are allowed to plant and grow stuff in conservation.

HKA: You guys have any *'ōlelo no 'eau* (proverb, wise saying) or any wise sayings? Not just in Aunty Mary Kawena's book, but within your family.

APKS: Yeah. No.

MKS: I don't think we have any clever sayings, but she's got plenty.

APKS: Yeah.

MKS: I wish I did.

APKS: Lia's our intermediary about wise sayings. She holds us together.

MKS: Clever place sayings.

JKS: We all have *'ōlelo Hawai'i* (Hawaiian language) to learn so ... I only know as much as I know in my *hula* (Hawaiian dance) but...

HKA: No, but even in English.

JKS: I'm going to say in English, we don't have it on a t-shirt, but I mean we're absolutely committed to the place [Hanalei] and—doing the right thing.

MKS: And being the best stewards, we can give the cost of it, right?

HKA: Yeah.

JKS: I think we live *mālama pono* (faithfulness to a person, cause or belief) every day. You know I think, trying to do the right thing. And I think, it seems that—I guess I feel that we—give a period of growing up—teens, twenties, thirties it seemed a little more adversarial around ... just in terms like government and private folks. I don't know, I feel like there's more recognition or just ...

MKS: Appreciation maybe?

JKS: People are trying to be more cooperative, right. And sometimes I feel like we were the bad guys or the rich guys or whatever, but I think we feel that stewardship responsibility. We feel the *kuleana* (responsibility, right, privilege). We know it, we have it, you know not everybody ask us about it, but we live that so ... you know, the privilege and the responsibility ... that's with us for sure.

HKA: Yup, that's totally what *kuleana* is. It's not just responsibility but it is privilege ... yeah, yeah.

MKS: We're lucky to be here.

HKA: Yeah, but they're lucky, they got good stewards.

MKS: We're doing our best.

JKS: I did hear it, the term, '*auamo kuleana*' ('*auamo*: pole or stick used for carrying burdens across the shoulders, *kuleana*: responsibility, right, privilege). I think that was from ... you carry it with you, right. It's a part of your being every day. And so, anyway, I think...

APKS: I think it would be a lot easier if it was more of us than them. (Laughter). More tourists.

MKS: Yeah. We're an endangered species like the rest of 'em (chuckles).

HKA: (Laughing.) So, you guys do any *kalo* (taro)?

MKS: Not personally, no.

HKA: Yeah. How about *māla* (cultivated field, garden), any gardens?

APKS: We have fruit.

MKS: We have fruit trees and stuff like that.

APKS: Avocados and we have a lot of '*ulu* (breadfruit), and we're trying to ... I'm on the board of National Tropical Botanical Gardens and they're trying to do agro-forestry. Yeah, so ... but things don't do so well in the sand around here, so.

HKA: You guys got plenty of sand in your soil over here.

APKS/MKA: Yeah.

APKS: Loamy, loamy soil.

MKA: We tried the shrimp.

APKS: Yes, we did.



MKS: But it was like every effort was rewarded with a flood and it all washed away. It got a little defeating ... So we have made an attempt ... even the fishpond that was going to be the plan ... was to try and ... whether that's ... you let school kids come or whatever right ... teach those guys how to throw net—let it be a resource—but between the liability and then it's just ... every move seems to have been sort of, I don't want to say undercut but meet a lot of resistance, whether it's Mother Nature or the government or the permits or whatever, right. So, it's not very easy to do it—as commercial enough that you do it for money. You know, we grow our fruit, and we go pick it, we give it away, and we make orange juice—and we let people come and fish, take what they can ...

APKS: I mean we would love to clean another pond, but it would have to be—a real business, a business plan, you don't clean it because it's pretty.

MKS: You can but it would cost a lot of money. It's a commitment of resources, right. So where do you get that from, and how do you get that back, you know? So that's the bummer about it, in the meantime you need ... I need commercial buildings, I need rental income to fund that, right? It's challenging.

HKA: How many floods did you guys have?

MKS: Plenty.

HKA: Like within ... let's say 15 years?

MKS: 100 (chuckles), 50.

APKS: We had a huge one in 2018.

MKS: Two-thousand eighteen was biblical right? It was like 50 inches [127 cm] of rain washed our end of town away. So, where you see that where that pond used to dead end Mother Nature came back and took all that, ran all down there and blew out to the beach. Like all the valley was draining to the ocean.

APKS: Yeah, to us.

MKS: Which went all across our property. So, the whole property was like 8 feet [243.94 cm], 10 feet [304.80 cm] underwater.

HKA: You couldn't tell yeah?

MKS: So, this place was like ... the water in all of Hanalei town was right to the bottom of the stairs, almost came through the front door, and we had just built this building, it was brand new. Oh my God, I can't believe this thing is going to wash away, you know. But so, it's—for me personally, it's defeating because you put all of this effort in and money into building these things and trying to do it and the *ua* (rain) just wants to take it away—it's challenging.

APKS: I think the open spaces is necessary because we are at the end of the line and if the river is going to overflow, it overflows up, and it just goes diagonally across us, and brings from the other side of the river whatever there is to us...

MKS: And ends up in our front yard, and we got it all, we end up with all the trash, you know.

APKS: Some of it is just planted ... (chuckles) we had a guy from Wainiha, he's a great guy. But he planted açai trees all the way along, and you know he can make a business out of that, and now they are six feet [182.88 cm] tall, and the guy who says he would like to pick 'em, run 'em, and sell the açai and all that because it's the hot thing to do. He gave us a business plan with four pages, but he never showed up.

MKS: Yeah, same thing, bad day—whoa, this is a lot of work, I'm out (laughing).

APKS: Yes, but all the *keiki* (small plants, child), it is a flood resistant plant. I mean it's been underwater a lot and it's huge, I mean all the berries, you need a cherry picker now.

HKA: Because of the berries.

APKS: Yeah. But you could take the keiki and take gold island and make a whole...

MKS: Açaí farm.

APKS: Orchard, but that's the easy part. The hard part is maintaining it and having somebody who will stay here, and that's enough for him because living here is so expensive.

MKS: That's the reason why the road is in the condition that it is right because of the floods, and the *hau* bush is so dense and it has been unmaintained for like 60, 70 years.

APKS: It's 20 feet [609.60 cm] into the river.

MKS: It's blocking, it's diverting the water flow especially periods of high water which we have a lot, all the time. It's directing water over to that road. But—the State's in a pickle because the option from all the experts is, you gotta raise the road 8 feet [243.84 cm] and move it inland. The State is like, "We already dropped \$ 400,000,000 on these 8 miles [12.87 km] of road from here to Hā'ena, from the bridge to Hā'ena, from Princeville to Hā'ena." I mean they dropped—gotta be the most ... probably twice what they spent on Hana. You know what I mean, they are dropping a lot of money to keep this road open, you know what I mean? So ...

APKS: People made it the scenic world road. That's why you have to do ...

MKS: Section 106. You gotta jump through all these hoops for them to do any work.

APKS: Yeah.

HKA: Yeah. So, how much land do you guys manage in this valley?

MKS: It's about 70 acres [.28 km]. Yeah.

APKS: Well, but I'd say 20 acres [.08 km] of that is pond.

MKS: Yeah, exactly.

HKA: Oh yeah—

MKS: Mowing green grass and paying property taxes (laughing).

JKS: Two hurricanes and annual flooding yeah.

MKS: We probably get four floods a year, and—of those usually one is a pretty bad one, like we've had—since 2000 probably. We've probably had a dozen that has put ...

APKS: When was Pflueger's big one?

MKS: '06.

APKS: '06.

MKS: '06, that was the Ka Loko Dam blow out. But we had a super bad one in '09. Every two or three years we have a 100-year flood or a 500-year flood. What they call is the 100-year flood we have it every two to three years, you know what I mean. So—

APKS: It's so hard because it rains hard in the mountains and when you see the waterfalls, all those waterfalls go to Wai'oli. Our waterfall is around the corner, you don't see it, you have a little meter up on the river, and it is supposed to tell you when it's up to 7 feet [213.36 cm]. At 15 feet [457.20] it blows out and goes down to 3 [feet] [91.44 cm], and then you go, "Holy—it's coming."

MKS: How much time do I have, an hour? I don't know, maybe a half an hour.

APKS: Overcast doesn't mean much when it's pouring up there...

MKS; Yeah.

APKS: ... when we have these flash floods, and now we overcorrect, which is as soon as the rain drops, we get a call saying head for higher ground (laughter).

MKS: The pendulum had swung the other way so now—overreacting, right—but I guess better safe than sorry. It's going to be challenging to navigate all this construction, which is necessary, but going to be at least a couple of years down here, especially with all of this going on.

APKS: We had an opportunity after the second hurricane and then we had an opportunity around pandemic when no one was here to really work on the roads and do it.

MKS: But they didn't have any money, and no one could do anything, so then the money gets allocated, right, when all the tourists are back, and it's busy, now we're going to do construction. What you gonna do, you have to do it right? You gotta do it.

APKS: You gotta find another way out of Hanalei. We are making a roundabout in Kīlauea.

MKS: Kīlauea. That's going to be great.

APKS: And that was ... The average person says, well we need an ingress and an egress, and we are going to do it one way, and you're gonna come out here, we're gonna go in here like we always do, but we're going to come out here so there isn't always this turning, and then somebody who wants to get out can't. The egress never happened, but we're going to change the ingress. And there is no other way to get out of town.

HKA: It's just like Kahalu'u on O'ahu, they're trying to do a roundabout over there.

MKS: Yeah. They're trying to carve some space they don't have right? They gotta steal it from somebody.

HKA: I'm like, what are they doing, just put a light already.

MKS: No, but it's challenging, right. They only have two lanes right and to move, you need to take somebody's house out to have enough space to do it, right?

HKA: Yeah.

MKS: I play tennis, and these ladies are, "Aww Kīlauea"—if they take out the gas ... there's a service station right there when you go in, and it's right in the way if they make this big thing. If they take that out... And there is nothing happening in Princeville.

MKS: Well, they're gonna close the Princeville one in January. So, the only gas station for everybody is going to be all the way to Kīlauea to fill gas, and if they're gonna move that one, you gotta go to Kapa'a to fill your car with gas. Imagine those poor guys from Hā'ena, they have to drive all the way to Kapa'a to fill their car with gas.

HKA; I would move.

MKS: Disaster, those guys are going to be so bummed, it's going to be so inconvenient. I mean, holy moly.

APKS/MKS/HKA: (Laughing.)

MKS: A little off topic.

HKA: That's what happens. I notice there's a lot of *hau* and they are all blooming. Do you all do seasonal picking—like *wana* (sea urchin)—planting of certain things?

MKS: I'm not that tuned into it, unfortunately. I'm not much of a fisherman. I get my fish from the *braddahs* (Hawaiian Pidgin for brother or male) ...

HKA: Yeah.

APKS: I think—paddler. We go up and down the river a lot. All we do is watch the growth, in general, of the *hau* because two, six men cannot go. All of a sudden, it's like this, and then you go up another time and you take your machetes, and you cut it back. But, you know, so they say after the flowing, if it's sunny, it's going to—all of a sudden, you cannot get between. So, between the two canoe clubs there, we do watch. Not me personally, but the clubs because in the winter you must go up the river. There are these big waves so sometimes you cannot go out, so you do the river. Yeah, so that's the whole point of Dolphin fixing their Gabion bags or whatever ... because the *hau* was creeping across and it was eating their lawn and they have rentals, and the lawn was here, and then the lawn is here, and then rentals were going to fall in, so they did this fix thing,

MKS: Emergency fix.

APKS: We tried to do a pilot project thing to clean the *hau* on our side of the which is this side, down just a little bit. And we took, what, a quarter mile.

MKS: Just about 500 ft. [15, 240 cm] section of *hau* bush out.

HKA: That's a lot.

MKS: Yeah, that's a lot of work.

APKS: Couple guys.

MKS: Kamealoha actually was spearheading that project so.

APKS: We tried to do it all by hand and not get in the river and the water, so we didn't have—I think we had some of those yellow things going. But we just took it from the root and we ... They pulled all the branches, and we cleared that much 20 feet [609.60 cm]. And now you can get three boats up there, and when you turn the corner, you can only have two boats, you go up a little further, you can only have one boat. So, but we just said, "Hey just give us some money and ..." One, you gotta get the landowner to say, "Yes, I'll let you on my land." But Kamealoha and their gang did great, and they had a chipper, and then they just spread it all—

MKS: The mulch—keep the weeds down.

APKS: So, everything was on our property, we did not have to make a mess anywhere else. The stumps are now still—there, and as they grow, we're gonna cut it off, it's a little better. But what pops up—completely, papaya trees all the way along.

MKS: All volunteers.

APKS: All volunteers. A little *hau*—we cut that and then *hala* (pandanus, screwpine [Pandnus odoratissimus]). We planted some, and then these other ones popped up.

MKS: And then ti leaves and all sorts of stuff. Sort of came up from the ground. They been buried under there for all those years.

HKA: All those years, yeah, they lay dormant.

MKS: Yeah.

APKS: There's probably really good stuff that's much more native than would come up. But we weren't thinking about that we were sure the mulch and everything could stay where it is, keep the weeds down, and—it was pretty thick. The new plant must go through a lot to...

MKS: Pretty cool, it's cool.

APKS: You found a good artifact.

MKS: Yeah, I found a nice adze and an '*ulumai*ka' (a stone used for a sport much like bowling) actually.

HKA: Wow. There should be, there should be quite a bit.

MKS: Yeah. That was pretty amazing.



APKS: But stone implements in a seaside area came from—

MKS: Sandy area came from someplace else.

HKA: Exactly.

MKS: It definitely was a traditional area where they would do that kind of work, but they got that stone from someplace else, either west side, Big Island, or whatever. It's interesting to see where they got it because there is not a lot of black basalt rock here. So, it was pretty cool.

APKS: But it was ... the adze was just beautiful. It was big and—

MKS: Like it was brand new, jet black, super smooth, the edges was sharp like they made it yesterday. Pretty cool.

HKA: Neat.

JKS: Kaumaka, I was just going to share. I don't know if anyone shared with you, but we do have *iwi* (bone, especially human) on the property, and we have relocated some *iwi*. I'm not sure if that's a conversation you want.

HKA: Yeah.

JKS: Mom knows more about it. I just know we have some.

HKA: You guys had it reinterred in an *ahu* (altar, cairn, shrine) or—

MKS: Mmmhmm. Yeah, we planted a little area for them—it was next to the fishpond when we were trying to do the shrimp pond in the back area by one of the Kānoa Ponds.

APKS: There was another one.

MKS: Nancy McMann was ... or was it Lei? I forget who, I think it was Lei.

APKS: Lei. That was the other one behind Allen's, yeah.

MKS: But she was—I think we found some fingers, digits. Based on the size of the digits alone or of the bone that it was from a *braddah* who was probably 7 feet [213.36 cm] tall... like a big guy—so he's over there by where Dr. Greenthumb is, right?

APKS: And then we sold the piece that Opunui thought that he remembered that one of his relatives was buried under a tree. Well, there were 99 trees by that time.

MKS: Atwood Makaanani them, right?

APKS: Atwood Makaanani. But it was his cousin who was saying—that he felt like there was *iwi* here and *iwi* there, and under the mango tree, but my land goes from the mango tree to the fence.

MKS: Old time markings, right?

APKS: So, we dug around the mango tree and there were four mango trees or something like that, no we never found any, but we found something in a whole other part which Gabriel E. said that his grandparents lived in front of the lot that we were going to sell. And he said that he remembers his grandparents being buried in the back of the lot which—what was the lot size, nobody knew. Between this lot and this lot, it could be in here or in here. So, we looked around and we found some and we made a little corner with rocks and then we wrote in the ... when we sold it, it has even and you couldn't do anything, don't dig it up, that kind of thing.

MKS: That's the best we can do.

HKA: Yeah.

APKS: So, then Keola [MKS] built a house sort of behind here and it was after the hurricane, and it was a kit house that we had gotten from New Zealand. They were going to put it up because of the water and they were digging the footings, and they found all these bones in the corner, and so we called Nancy, and she said, “Aww, I got my big fat book out and I’ll let you know tomorrow ...” everything stops.

MKS: They were pig bones.

APKS: And she said, they are pig bones (laughs) ... thank God.

HKA: They must have been kind of robust, yeah.

APKS: Yeah. That was really a relief because that would have—

MKS: I didn’t really want that ... bad juju on me ... building on somebody’s grave, you know. Probably—was just eating, and they threw their bones after *pau* (finish, ended, completed) eating.

HKA: A little midden pile.

MKS: Little leftovers.

APKS: Well, yeah, you know ... then the hard part about finding human bones is that ... I don’t think it was an appointment but whoever was the burial council, for this island, they only had one out of six or whatever it was. So, they were trying to find people to be on the burial council.

MKS: So, they could have a quorum and make decision on how to handle it right.

APKS: Right. And who was going to do the research whether that family had *‘ohana* (family) somewhere.

MKS: If they want to take possession of them—it end up being more appropriate to just leave them on site—

HKA: Yeah. Probably going to be cultural descendants instead of lineal descendants.

MKS: Exactly.

APKS: And then they had, okay ... if it's a lot of bones, then we have a special basket.

HKA: Yes, the *lauhala* (hala or pandanus leaves).

APKS: Yes, but somebody had to weave it ... so it's like wait to be finished weaving the basket. So, it—  
was a few months.

HKA: There are baskets at Walmart too. Sorry, but—

MKS: Best thing we can do at the time, right.

HKA: Yeah.

MKS: Or you are gonna donate one of your good bags? Sorry—

HKA: And really, and truly you know the brown bags—that's the best place to put it because if you need  
some place immediately, you put it in a brown paper bag because it keeps it dry. And you know—

MKS: You gotta do something.

HKA: You gotta do something.

MKS: In short notice, yeah.

HKA: That's the best you can do, and then you can figure it out.

MKS: What the appropriate thing.

HKA: You not wanna have them—

MKS: You wanna *mālama* (take care of, maintain, protect, preserve) them—

APKS: Well, in 10 years we've gone from you gotta be authentic to you can't make them fast enough. Are you gonna pay somebody to make 12 so you can divvy them out? There is some guy in Hā'ena that built a house on the beach, and he found bones. And they said...

MKS: He found a lot of 'em.

APKS: We need to decide how to handle it, and then they said, you should have them on your property and put them together and keep them together, so they are not disturbed. He put it on his property and then concreted over it, and that was his driveway (laughing).

HKA: Oh my—

MKS: Plenty of flat tires.

APKS: You gotta be specific, you know, you cannot just say, keep them together.

HKA: Yes.

APKS: We did say, put concrete but... I think he sold because people gave him so much—

MKS: Yes, he did. That was totally a graveyard.

APKS: I mean it was such a slap in the face to everyone who wanted to see something more culturally...

HKA: I would have waited until these people come before ...

\*\*\*\*\* Phone ringing \*\*\*\*\*

HKA: What kinds of fish are inside of the river?

APKS: Mostly tilapia. We have seen one *ulua* (game fish; certain species of crevalle, jack, or pompano) going up. Turtles, there have been turtles.

MK: The saltwater pushes all the way to the bridge and probably beyond.

HKA: The *kākū* (barracuda [*Sphyraena barracuda*]) lives in freshwater too.

MKS: And there is plenty in the pond too—there's not *moi* (threadfish [*Polydactylus sexfilis*]) but ...

APKS: But we put in a whole bunch of *moi pua* (baby *moi*) and mullet *pua* (baby mullet), and you just hope they survive the tilapia, and you don't know until you see them bigger. There's a lot of crabs.

HKA: How about the mud crabs.

MKS: Yeah.

APKS: Lots of crabs.

MKS: Lots of *ulua*, lots of tilapia unfortunate.

APKS: We used to have lots of frogs too.

MKS: There's *awa* (milkfish [*Chanos chanos*]) ... lots of *awa*, lots of mullet, *pāpio* (same as *piopio* or stage of growth before *ulua*)—there used to be *ulua* because they grew up and got big enough but there was an algae boom and most of them died. I don't know the biggest one I've seen, don't know if he's graduated—10 pounds when they graduate from *pāpio* to *ulua*?

HKA: Yeah ...

MKS: Couple baby *ulua* in there but ... Yeah, it's pretty active.

HKA: And you guys get any '*ōpae* (shrimp)?

MKS: Lots of '*ōpae*. I mean—I shouldn't say lots, but I have seen 'em. Yeah, pretty healthy.

HKA: Yeah, good. When you can see, that's a good sign—yeah.

MKS: That's a healthy environment, yeah.

HKA: Any *hīhīwai*?

MKS: Those are the little shellfish.

HKA: Yeah, the little snails?

APKS: No, I've looked, but I haven't seen any.

HKA: Nā Pali used to have plenty.

MKS: More rocky, right? Yeah, at Wai'oli we used to go up, and try to scoop 'em, pick 'em.

APKS: Yeah, by Lumahai we used to do that too.

MKS: Yeah.

APKS: I look for '*opihi* (limpet) and that is about all I pick.

HKA: So, what, get *‘opihi* out here—

APKS: No, they have been scraped clean and you’re supposed to have them half-dollar size.

MKS: I don’t think there is much in Hanalei.

APKS: No, they have been ...

MKS: I went way down Nā Pali to get some, but I think they picked them pretty clean.

HKA: How about *he‘e* (octopus [*Polypus* sp.]?)

MKS: I think they still do that out here. I don’t personally do it. I know they try. They do it all by Tunnels. There is like a conservation zone so all of those Hā‘ena guys are pretty active in their stewardship of that, and still try to practice all of that.

APKS: Yup. Hā‘ena is much more abundant because here we had people pour Clorox [brand bleach] on the reef or other things, and whatever pops up. Because of the river and we’ve had so much water and flood, and because the river, for me, is shallow now because it’s silted in. What gets out of the river ends up on the reef, so the reef is pretty brown. It cleans off more in the winter because the waves wash it away, but in the summer, we paddle all out there and it’s all brown till the very edge. So, I don’t know if Hanalei is the best place to do reef stuff. They all go diving in other places. Kīlauea is probably good because it’s always ...

HKA: What is the two *hoe wa‘a*, (paddler, paddling) canoe clubs you mentioned?

APKS: Nā Molokama is one, and they are both down by the river, and Hanalei Canoe Club. They’re kind of on the river, both of them.

HKA: So, they are always paddling by the river.



APKS: Yes, they both are competitive clubs, and they have recreational paddling for the older folks. And so, the beginners go up the river and the other ones go out to sea, go to Kīlauea Lighthouse.

MKS: So, they are in the ocean and the bay in the summertime, and then—usually around September—they stay in the river.

JKS: And we actually host, right?

MKS: We are the landlord, and they are our lessee.

JKS: Yeah.

MKS: So, we lease the facility to them.

JKS: We support that, and we have for a long time.

MKS: Yeah, they have been lessees since '75.

HKA: So, any *hula* (Hawaiian dance, dancer) inside the valley?

APKS: Oh, ask Naomi, yeah. Lots of *hula*.

MKS: They have a *hālau* (hula school, long house), don't they?

MKS/APKS: Na'omi does.

HKA: She has a *hālau*?

APKS: Beth Ka'ōnohi has.

HKA: Oh nice.

MKS: She teaches the kids and stuff. I don't know how active she is—

APKS: No, she has a *hālau*. But they were the choir, her whole family, their lineage on both sides ... their singers, fabulous. Wai'oli Hui'ia Church. They have been the choir for that, and people come just to listen to them. Chandlers have married them, Mahuikis who have married, and they are all related. And they all have beautiful voices. She's the one to ask about that. We just practice and ...

JKS: But she teaches at school, right? She teaches for May Day and stuff for Hanalei School, is that right?

MKA/APKS: No, Mala Fuda.

MKA: But I think ... no she has her own *hālau*. Hale Halawai, I don't think that Mala also, but I think she's the May Day coordinator.

APKS: She has been, and I don't know if it's because she has kids there or grandkids there. Naomi would know. There's Devin Forest who's become a lawyer, has a *hālau* with Stacey at Waipā. So, Darcy occasionally dances with them. A niece who kind of comes and goes. But he ...

JKS: So, it's adult and children *hula* for him, Devin at Waipā?

APKS: Devin, Devin Forest.

JKS: Is it adult and children, is what you're saying, at Waipā?

APKS: Yeah, I mean in the summertime with Stacey and Waipā has a summer program. So, are you talking to her?

HKA: I tried to get ahold of her. I think I must call her because I have been sending her emails to Waipā.

MKS: Oh, to Stacey. Mala would be a good resource too, she—lives right up on Plantation Road ... yeah, she would be good.

APKS: But I think ...

MKS: Naomi would be good too.

APKS: I'm trying to think of who's number two now with Stacey because ... 'Uhi, you know 'Uhi's last name?

MKS: She's a Foo. 'Uhi the who used to coach, yeah, she's a Foo.

APKS: But is she married, is that her name?

MKS: I'm not sure if she's married, though.

APKS: Yes, she had two kids.

MKS: Oh, I'm not sure if she's married.

APKS: I know, that's why I'm asking what her name is. Naomi might know 'Uhi, and she's young and she works a lot at the foundation.

MKS: With Stacey.

APKS: And ... she's great with kids, and they have a kid's program now. Alabak and Lilian's daughter. Lilian Vitoire.

MKS: Vitoire.

APKS: They are interns for all these kids.

MKS: Oh really?

APKS: So, my grandson, Lia's son, came over and play in the yard yesterday, and ... Ella, his cousin, wants me to fix her car, what is she doing? I said, she's working next door. Her job is here, she's been working here. I said, why does she need her truck fixed? He said, I'm not rushing over there, she can walk to work.

MKS: Take a horse.

APKS: Anyway, it's a really good program and they have a lot of ... KS (Kamehameha Schools) usually has explorations and sometimes they have it there. But this is just island wide kids come of all ages and they have a little fishpond, Halulu Fishpond. It was completely nonexistent, you didn't know it was there except it was on the map, and they tried kind of cleaning around it, and the water came back.

HKA: And where is this, Waipā?

APKS/MKS: Waipā.

APKS: So that's on the beach, and they are kind of on the *mauka* (toward the mountains) side. I think they have like 1600 acres from KS. And they've done a beautiful job in the first part. And they have farmers markets, and they have *hula*, and they have ... they make *poi* (pudding-like staple made from the taro corm) and they make ...

MKS: They have *laulau* (food wrapped in taro leaves with different meats) and all kinds.

APKS: Everything, and they have an icebox, and they do like an honor system.

MKS: Honor system.

APKS: It's great, it's really great and she's ... Stacey always said, my goal is to have *kūpuna* (elder, ancestor) housing and a school because there used to be a school in Hā'ena, and it got washed away with the second Tsunami and so those kids have to come either to Hanalei School until sixth grade because then you have to go to Kapa'a, and the roads are getting worse and worse, and every time you work on something, sorry you gotta get to the bus stop at 4:30, 5:00. You know it's miserable for the kids.

MKS: Yup, long days.

APKS: Long days. I think it was a dream of her father's and ... in his tenure, KS wanted to make gentlemen farmers, because 1600 acres. And so that idea died because Stacey's is Napua ...

MKA: Kapua. There is Nanea and Kapua.

JKS: Napua.

APKS: Napua.

MKA: Oh, is it Napua? I thought it was Kapua.

JKS: Sorry, sorry, sorry, it is Kapua, you're right.

APKS: Anyway, one, she became a lawyer, and two, Neil Hannahs, they all went to school together. Between the sisters, and they talked to him around, you know gentlemen farmers ...

MKS: Good call.

HKA: Yeah, they are doing really good over there.

MKS: Yeah.

HKA: So, do you know anything about the Mahele? You kind of mentioned about the land ... A. S. Wilcox got some land. Do you know anything ... now we should go into the sugar ... was there any railroad coming through here?

APKS: Not that I know of.

MKS: Not railroad, but there was ...

APKS: A railroad car that took. It was, it had tracks ...

MKS: There was a little railroad cart. It was on tracks and went out to the pier, it used to go to the pier. So, it came through the property.

HKA: There used to be cattle, right? Cattle and sugar.

MKS: Cattle, and they tried sugar. They tried ...

HKA: Coffee too yeah?

MKS: Silk, they tried all kinds of stuff.

APKS: A. S. tried silk. Well, mulberry bushes, yeah, they did. It didn't work, coffee didn't work, too wet. So, rice and taro were the only things that really worked, you know, I mean ...

MKS: The cattle were at Princeville—on the bluff. But there were tracks because there are some old bridges that would go to the back of the property and to the pier. There were some tracks on the original pier.

APKS: It wasn't a train; it was just a way for them to get taro to the pier so they could put it on the boat.

MKS: So, there was some of that for sure. We got some remnants of that.

HKA: Surprising they didn't have those oxen in the water. They had them in Punalu'u and different places.

MKS: There are some pictures of some cattle and they slinging them onto the boat, right?

APKS: They had. They roped them and dragged them out there. Yeah, they did that.

MKS: Yeah, that was kind of cool.

HKA: Any concerns? Or interest? Or concerns you guys have? In the area ...

APKS: We don't have enough time (laughter).

MKS: Other than ... you know.

APKS: It's the price of paradise. Truly, you try to be a good steward and you ... it's a balance between nature and man. And there is so many people and they don't understand the ... I mean, people, you are cutting something in your yard, and they say, "Oh cannot cut that native plant. Not native guy." Just keeping it out of the landscape is a big thing. The *hau* is forever will be growing and you know if we are going to keep this river and not kill the reef, we better fix the river ... get it so that it flows, so it opens, so that the water goes out. Because it is all connecting, you cannot do this and expect that ... it's all connected. And I don't think that the powers that be get it. Same thing, if you fix a road, the problem is, if we have a disaster of some kind, we need to get out of town, and there is so many people who don't work where they live, and live where they work, they have to come in and get the dog and the kid, and they want to get in that bridge, and we need to get out that bridge. And that's not even the visitor.

HKA: Yeah, that's the people from here.

APKS: Maybe it's time to have an alternate road out. Just like Kīlauea. Alternate road out—the road now is a second road, there was another road. So, if we can go to the moon, we can make another road out of Hanalei. And you may have to add on to the bridge and make a second walking path until it's an emergency exit, and the cars are only going one way, and they get out, so people can come

in ... Too bad for the visitor, it's the local person who is working so hard wherever and they have to come in and get their stuff. That's my concern is that you got to balance man and nature.

HKA: So, I'm going to end this interview right here. *Mahalo nui, Lia. Mahalo!*



## **APPENDIX C: CONSULTANT BIOGRAPHICAL DATA SHEET**





**Biographical Data Sheet**

Interviewer Name:

Date of Interview:

Participant's first name:

Participant's last name:

Participant's middle name (if applicable):

Participant's maiden name (if applicable):

Contact information:

Mailing address:

Town:

Island:

State:

Zip Code:

Email:

Phone:

Birthdate (year):

Place born:

Gender:

Citizenship:

Ethnicity:

Language(s) can speak:

Places Lived & When:

Currently living in:

Father's name:

Mother's name:

How many siblings? What is the participant's place in family (order of siblings)?

Participant's spouse?

Name of spouse:

Birthdate of spouse:



Birthplace of spouse:

Children (how many and how old):

Ancestors:

Names of maternal ancestors:

Location of where maternal ancestor(s) lived/moved?

Years maternal ancestor(s) lived:

Name of paternal ancestors:

Location of where paternal ancestor(s) lived/moved?

Years paternal ancestor(s) lived:

Education:

Elementary:

Intermediate:

High School:

Other (trade school/college):

Employment:

Previous jobs (title, dates, location):

Current job (title, dates):

Interests/skills/hobbies:

Religion:

Community/professional organization involvement (past & present):

**What public emergencies or natural disasters have you experienced during your lifetime?**

**Is there anything specific you would like me to ask you during the interview?**



