FILE COPY

DAVID Y. IGE
GOVERNOR OF HAWAII

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

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

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

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

MAR 22 2017

APR 08 2017

Mr. Scott Glenn, Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 S. Beretania Street, Room 702
Honolulu, Hawai'i 96813

RECEIVED
'17 MAR 24 A8:39
OFC. OF ENVIRONMENTAL QUALITY CONTROL

Dear Mr. Glenn:

Final Environmental Assessment and Finding of No Significant Impact
For Hanakāpī'ai Bridge Project Nāpali Coast State Wilderness Park, Kaua'i
TMK (4) 5-9-001:001

The Department of Land and Natural Resources hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the subject project at TMK (4) 5-9-001:001 on the Island of Kauai. Please publish the FEA-FONSI in the next available edition of the Environmental Notice.

Public comments and corresponding responses that were received during the 30-day public comment period for the draft environmental assessment are included in the FEA-FONSI. Based on the significance criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that preparation of an Environmental Impact Statement is not required.

Enclosed is a completed OEQC Publication Form, a copy of the FEA-FONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word.

If there are any questions, please contact Mr. Carty Chang, of our Engineering Division at 587-0230.

Sincerely,

SUZANNE D. CASE
Chairperson

Enclosures: One (1) hard copy of FEA-FONSI
One (1) hard copy of OEQC Publication Form
One (1) CD containing the FEA and OEQC Publication Form

17-411

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

TO: Suzanne D. Case, Chairperson

FROM: Curt A. Cottrell, Administrator

SUBJECT: Approval of the Final Environmental Assessment and Approval for the Issuance of a Finding of No Significant Impact (FONSI) for the Department of Land and Natural Resources, Hanakāpīʻai Bridge Project, Nāpali Coast State Wilderness Park, Kauaʻi

BACKGROUND:

Nāpali Coast State Wilderness Park, on the North Shore of Kauaʻi, is experiencing increased visitation on the Kalalau Trail, especially on the first 2-4 miles of the trail, which has led to an increased numbers of hikers exposed to sometimes dangerous flooding conditions at Hanakāpīʻai Stream. The trail begins at Keʻe Beach in Hāʻena State Park and traverses the slopes of the Nāpali Coast 12 miles to Kalalau Valley. Hanakāpīʻai Valley is located 2 miles into the trail, where hikers must ford Hanakāpīʻai Stream to reach Hanakāpīʻai Beach, continue on to Kalalau Valley, or turn inland to follow the 2-mile Hanakāpīʻai Falls Trail to a waterfall at the back of the Valley. During normal, non-flood conditions in Hanakāpīʻai, the 2-foot-deep stream is easily forded by hikers. However, during rapidly developing flash flood events, the stream crossing becomes perilous quickly, with the potential to wash hikers downstream and out to dangerous ocean conditions.

Estimates of visitation of the Nāpali Coast State Wilderness Park have increased in the last 20 years from less than 500 daily visitors in peak season in 1993 to over 2,000 daily visitors in 2011. This increased visitation correlates with an increased need to rescue stranded hikers by helicopter – the cost and personal risk of which is shouldered by the Kauaʻi Fire Department. State Parks, therefore, proposes to construct a pedestrian bridge over Hanakāpīʻai Stream in order to allow hikers exiting the park safe passage across the stream during flooding.

State Parks does not expect this proposed bridge to cause any further increase in park visitation because the amenity will not make the already manageable stream crossing significantly easier during non-flood conditions. During flood conditions, the park will be closed according to standard State Parks closure protocols, which prohibit the entry of hikers after the time of closure. The proposed bridge, will, however, allow safe exit for hikers who entered the park prior to park closure and/or camped overnight at Hanakoa or Kalalau, thereby dramatically reducing the need for the Kauaʻi Fire Department to mount dangerous and costly helicopter rescue missions.

PROJECT DESCRIPTION AND LOCATION:

The proposed bridge at the Hanakāpīʻai Stream crossing would be an aluminum truss-type bridge with plastic wood decking and a dark brown powder coating. This bridge type and these materials were selected for their durability, cost-effectiveness, easier maintenance and minimal environmental impacts. The 4-foot wide pedestrian bridge would span the stream bank-to-bank over 80 feet in such a way that the abutments and construction work would be entirely outside of the delineated stream.

The bridge would have a shallow deck and not require any piers, since it would clear-span the stream. Its lightweight design would allow for reasonably sized concrete abutments, a reduced number of micropile supports and minimal amount of excavation during construction. The bridge would be fabricated in three segments and flown to the site by helicopter, where it would be field bolted together in a relatively short duration of time.

The proposed bridge alignment is offset from the trail inland on the east bank to avoid obstructing the historical route of the Kalalau Trail and would require approximately 50 feet of new trail to connect the bridge to the existing trail.

The expected cost of the proposed bridge is $106,500. The estimated total project cost is $506,000, including abutments, micropiles, trail improvements, helicopter installation, and construction.

The Draft Environmental Assessment has been published by the State of Hawaii, Department of Health, Office of Environmental Quality Control (OEQC), in the October 8, 2016 bulletin and is posted on the OEQC website at http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2010s/2016-10-08-KA-5B-DEA-Hanakapiai-Stream-Bridge.pdf . Attached for your information is the Final Environmental Assessment.

PROJECT SUMMARY:

Project:	Hanakāpīʻai Stream Bridge Project
Agency:	Department of Land and Natural Resources Division of State Parks 1151 Punchbowl Street, Room 310 Honolulu, Hawaii 96813
Consultant:	Tetra Tech, Inc. 737 Bishop St. Honolulu, Hawaiʻi 96813

Tax Map Key:	(4) 5-9-001:001
Proposed Action:	The Department of Land and Natural Resources, through the Division of State Parks and the Engineering Division, proposes to install a 4-foot wide, 82-foot long aluminum truss pedestrian bridge across Hanakāpīʻai Stream and construct approximately 50 feet of new trail to connect the bridge to the existing Kalalau Trail in the Nāpali Coast State Wilderness Park, on Kauaʻi Island, Hawaiʻi.
Land Area:	Project Site < 1 acre
State Land Use District:	State Land Use Conservation District
Existing Land Use:	DLNR State Park
Present Zoning:	P-1
Special Management Area:	Yes
Permits That May be Required:	Special Management Area Major Use Permit; Site Plan Approval (SPA)

FINDINGS AND REASONS SUPPORTING RECOMMENDED☐ DETERMINATION:

Chapter 11-200-12, Hawai'i Administrative Rules, sets forth significance criteria that agencies must consider when determining whether an action will have significant effects. Every phase of a proposed action, the expected primary and secondary consequences, and cumulative, short-term and long-term effects on the quality of the environment are to be considered, in accordance with the following:

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.*
   A cultural analysis conducted for the project determined that no cultural resources are expected to be harmed by the project. Best management practices advised by United States Fish and Wildlife Service (USFWS) and State of Hawai'i Division of Forestry and Wildlife (DOFAW) will be employed during construction to ensure no rare or endangered species are harmed.

2. *Curtails the range of beneficial uses of the environment.*
   The bridge was sited in a location that does not impact the existing historic trail nor curtail use of the traditional path of the Kalalau Trail.

3. *Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*
   The project does not conflict with any of the state's long-term environmental values, as the environmental footprint of the proposed bridge is small.

4. *Substantially affects the economic welfare, social welfare, and cultural practices of the community or State.*
   The proposed bridge is not expected to substantially affect the economic or social welfare of the neighboring community or State. As previously mentioned, the proposed bridge location is offset from the trail to ensure continued access to the historic trail route.

5. *Substantially affects public health.*
   The proposed bridge is not expected to have any detrimental effects on public health and is expected to increase the safety of both hikers and emergency responders.

6. *Involves substantial secondary impacts, such as population changes or effects on public facilities.*
   State Parks believes that the proposed bridge will not increase the use of the Kalalau Trail because of the rigorous trail closure protocols in place to prohibit hikers from accessing the park during dangerous flood conditions. Therefore, no substantial secondary impacts are expected.

7. *Involves a substantial degradation of environmental quality.*
   The proposed bridge is not expected to result in significant degradation of the environmental quality of the project site. The proposed bridge clearly spans the stream to avoid any impacts to aquatic ecosystems. The bridge design proposes the use of MAI-type micropilings, which will result in smaller abutments than traditional bridge foundations. The bridge alignment will require approximately 50 feet of new trail, resulting in the clearing of some vegetation. It was determined that no rare or endangered species are expected to be harmed in this clearing, and as stated previously, best management practices will be employed to ensure no harm comes to endangered species.

8. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*
   The bridge is not expected to cause significant harm the environment and therefore a commitment to larger actions is not required.

9. *Substantially affects a rare, threatened, or endangered species, or its habitat.*
   The Hawaiian Hoary Bat is known to roost in mixed forest habitats on Kaua'i. To avoid impacts to this species, as advised by USFWS and DOFAW, the project will not remove any trees larger than 15 feet during the birthing and pup-rearing season June – September 15, unless supervised by an avian biologist. Additionally, several endangered waterfowl may be present in the region. In the case that any of these species are sighted in the project area, an

avian biologist will be contacted accordingly. To avoid impacts to seabirds, construction will not occur at night.

10. *Detrimentally affects air or water quality or ambient noise levels.*
The project is not expected to affect water quality, as the project does not involve any fill in the stream channel, even in 100-year flood conditions. The construction will result in a temporary, minimal increase in ambient noise levels resulting from helicopter transport and tools. This noise will cease upon completion of construction. In the long-term, noise levels will decrease as fewer helicopter rescues are required.

11. *Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.*
The project area is located outside of the 0.2% Floodplain and is inland of historic tsunami wash up areas. The proposed bridge is far enough inland to be vulnerable to coastal erosion or impact coastal waters. As previously stated, the bridge design clear spans the stream to have no impact of estuarine or aquatic ecosystems.

12. *Substantially affects scenic vistas and view planes identified in county or state plans or studies.*
The installation of a bridge would introduce an additional man-made feature and alter some views in the area. The bridge will not be visible in many areas due to the dense foliage of the valley. The proposed bridge materials and design were selected to mitigate this impact to the extent possible. The aluminum bridge would be finished with a dark brown powder coating to better assimilate with the color palette of the forest and stream banks. Additionally, a plastic wood composite decking is proposed to cover the walkway of the bridge, adding a more natural aesthetic to the bridge.

13. *Requires substantial energy consumption.*
The proposed bridge will be pre-fabricated off-site and will need to be shipped to a staging location and carried by helicopter to the project site. The bridge will be constructed as efficiently as possible, using as few helicopter trips as possible.

For the reasons noted above, the proposed improvements are not expected to have significant effects in the context of Chapter 343, HRS, and section 11-200-12, HAR.

RECOMMENDATION:

In accordance with the Board of Land & Natural Resources approval on August 12, 2016 of Item L-6, authority was delegated to the Chairperson to approve an Environmental Assessment and Issue a Finding of No Significant Impact:

1. Approve the Final Environmental Assessment for the installation of the proposed bridge at Hanakāpīʻai Stream, Nāpali Coast State Wilderness Park, Kauaʻi.

2. Issue of a finding of no significant impact (FONSI) for the proposed project. Based on the review of the Final Environmental Assessment and the comments received during the 30-day period in addition to DLNR State Parks responses, find that the project will not have a significant effect on the environmental and cultural resources of the area.

3. Authorize the Chief Engineer to publish a FONSI for the proposed project in the Office of Environmental Quality Control's The Environmental Notice.

☒ Approved ☐ Disapproved

MAR 14 2017

SUZANNE D. CASE DATE
Chairperson

Attachment: (1) Final Environmental Assessment for the Proposed Hanakāpīʻai Bridge Project

AGENCY
PUBLICATION FORM

Project Name:	Hanakāpīʻai Stream Bridge Project
Project Short Name:	Hanakāpīʻai Stream Bridge Project
HRS §343-5 Trigger(s):	Use of State lands and State funds; Use of State Conservation District Land
Island(s):	Kauaʻi
Judicial District(s):	Hanalei District
TMK(s):	4-5-9-001:001
Permit(s)/Approval(s):	SMA Major Use Permit, Conservation District Use Permit
Proposing/Determining Agency:	State of Hawai'i, Department of Land and Natural Resources, Division of State Parks
Contact Name, Email, Telephone, Address	1151 Punchbowl Street, Room 310 Honolulu, Hawai'i 96813 Contact: Lauren Tanaka, Planning & Development Branch Phone: (808) 587-0293; Email: lauren.a.tanaka@hawaii.gov
Accepting Authority:	(for EIS submittals only)
Contact Name, Email, Telephone, Address	
Consultant:	Tetra Tech, Inc.
Contact Name, Email, Telephone, Address	737 Bishop Street, Suite 2340 Honolulu, Hawai'i 96813 Contact: Alison Andrews Phone: (808) 441-6651; Email: ali.andrews@tetratech.com

Status (select one)	**Submittal Requirements**
____ DEA-AFNSI	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
_x___ FEA-FONSI	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
____ FEA-EISPN	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
____ FEIS Acceptance Determination	The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
FEIS Statutory Acceptance	Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.

____ Supplemental EIS Determination	The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

Project Summary
Provide a description of the proposed action and purpose and need in 200 words or less.

The Department of Land and Natural Resources, through the Division of State Parks and the Engineering Division, proposes to install a 4-foot wide, 82-foot long aluminum truss pedestrian bridge across Hanakāpīʻai Stream and construct approximately 50 feet of new trail to connect the bridge to the existing Kalalau Trail in the Nāpali Coast State Wilderness Park, on Kauaʻi Island, Hawaiʻi.

FINAL ENVIRONMENTAL ASSESSMENT
Hanakāpīʻai Stream Bridge Project
Nāpali Coast State Wilderness Park
Kauaʻi, Hawaiʻi

Prepared for

Department of Land and Natural Resources
Division of State Parks
1151 Punchbowl Street
Kalanimoku Building, Room 310
Honolulu, Hawaiʻi 96813

March 2017

Prepared by

Tetra Tech, Inc.
737 Bishop Street, Suite 2340
Honolulu, Hawaiʻi 96813

Table of Contents

Appendices

Project Information Summary

Project Name:	Hanakāpīʻai Stream Bridge Project
Document Type:	Final Environmental Assessment (FEA)
Legal Authority:	Chapter 343, Hawaiʻi Revised Statutes (HRS)
Environmental Assessment Trigger:	Use of State Conservation District lands; Use of State lands and State funds
Determination:	Finding of No Significant Impact (FONSI)
Location:	Nāpali Coast State Wilderness Park, Island and County of Kauaʻi
Judicial District:	Hanalei District
Tax Map Key (TMK):	(4) 5-9-001: 001
Land Area:	Bridge area – 328 square feet (4 feet wide and 82 feet long) New trail area – 51 feet of new trail (4 feet wide)
Landowner:	State of Hawaiʻi, Department of Land and Natural Resources, Division of State Parks 1151 Punchbowl Street, Room 310 Honolulu, Hawaiʻi 96813 Contact: Curt A. Cottrell, Administrator Phone: (808) 587-0300
Proposing and Determining Agency:	State of Hawaiʻi, Department of Land and Natural Resources, Division of State Parks 1151 Punchbowl Street, Room 310 Honolulu, Hawaiʻi 96813 Contact: Curt A. Cottrell, Administrator Phone: (808) 587-0300
Consultant:	Tetra Tech, Inc. 737 Bishop Street, Suite 2340 Honolulu, Hawaiʻi 96813 Contact: Alison Andrews Phone: (808) 441-6651
Existing Use:	Kalalau Trail in the Nāpali Coast State Wilderness Park

Proposed Action:

The Department of Land and Natural Resources, through the Division of State Parks and the Engineering Division, proposes to install a 4-foot wide, 82-foot long aluminum truss pedestrian bridge across Hanakāpīʻai Stream and construct approximately 50 feet of new trail to connect the bridge to the existing Kalalau Trail in the Nāpali Coast State Wilderness Park, on Kauaʻi Island, Hawaiʻi.

Current Land Use Designations:

- *State Land Use:* Conservation District, Resource Subzone
- *County Zoning:* Preservation
- *Special Management Area (SMA):* Within SMA

Alternatives Considered:

- *No Action:* The proposed bridge would not be constructed at the Hanakāpīʻai Stream crossing, and the existing hazard to public safety would remain for hikers on the Kalalau Trail attempting to cross the stream during flash flood conditions.
- *Alternative bridge alignments:* Alternative bridge alignments were considered across the stream. Specifically, a crossing that intersects the historic Kalalau Trail on the east bank was considered but not carried forward due to its impact to archaeological resources on the trail. No other feasible alternative alignments were identified or explored further in this analysis.
- *Alternative bridge designs:* Several design alternatives were considered. Because the bank-to-bank span is greater than 80 feet, only truss-type options were appropriate. Due to encroachment issues and uneconomically large amount of material required, suspension and cable-stayed bridges were not considered. Three alternatives were evaluated for the proposed material of the pedestrian bridge: steel, aluminum, and fiberglass. Due to the high maintenance costs and remote location, a wood structure was considered to be infeasible. A pre-fabricated truss style aluminum bridge, with plastic wood composite decking and dark brown powder coating finish is the proposed alternative as it is environmentally friendly, cost-beneficial, nearly maintenance-free and highly durable.

Potential Impacts and Mitigation Measures:

The Project would benefit the public by providing a safe way to cross Hanakāpīʻai Stream during flash flooding events while minimally altering or affecting the environment. It is anticipated that he Project will have the following impacts by resource:

- *Air Quality:* short-term, minimal adverse effects during construction.
- *Airspace:* no adverse effects.
- *Biological Resources:* short- and long-term, minimal adverse effects during and from construction.
- *Cultural Resources:* no adverse effects.
- *Geology, Topography, and Soil:* no adverse effects.
- *Noise:* short-term, minimal adverse effects during construction.
- *Public Access and Recreation:* short-term, adverse effects during construction; long-term beneficial effects.

- *Socioeconomics:* no adverse effects.
- *Utilities and Public Infrastructure:* no adverse effects.
- *Visual Resources:* long-term, minimal to moderate adverse effects.
- *Water Resources:* no adverse effects.

The following mitigation measures would be implemented to minimize potential adverse effects on visual, cultural, and freshwater resources:

- Dark brown powder coating will be applied to the aluminum bridge structure to better assimilate the structure with the natural landscape.
- Plastic wood composite decking will be laid on the walkway of the bridge to better match the natural aesthetic of the site.
- The proposed bridge alignment will cross the stream inland of the current stream crossing to avoid historic rock pavers, which are considered archaeological resources, and to allow for future use of the historic route of the Kalalau Trail through the stream.
- The proposed bridge will clear-span the stream to avoid any impacts to freshwater aquatic species and water quality.

Determination:

Finding of No Significant Impact (FONSI) for the reasons noted above.

1 Introduction

This section presents an overview of the project including location, bridge design and materials, purpose and need for the project, initial addressing of the impacts to recreation, which will be further discussed in Section 3.10, and the purpose of this Environmental Assessment.

1.1 Project Location and Description

The State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks, proposes to build a pedestrian bridge over Hanakāpīʻai Stream for use by hikers along the Kalalau Trail.

Hanakāpīʻai Stream is located in the Hanakāpīʻai Valley in the Nāpali Coast State Wilderness Park on the North Shore of Kauaʻi. Hanakāpīʻai Beach, where the stream reaches the ocean, can only be accessed by foot on the Kalalau Trail, by boat, or by helicopter. The trail intersects Hanakāpīʻai Stream 2 miles from the trailhead at Kēʻē Beach and 300 feet inland from the beach. The proposed bridge would be an aluminum truss-type bridge with plastic wood decking and a dark brown powder coating. This bridge type and these materials were selected for their durability, cost-effectiveness, lack of maintenance requirements and minimal environmental impacts. The 4-foot wide pedestrian bridge would span the stream bank-to-bank over 80 feet in such a way that the abutments and construction work would be entirely outside of the delineated stream.

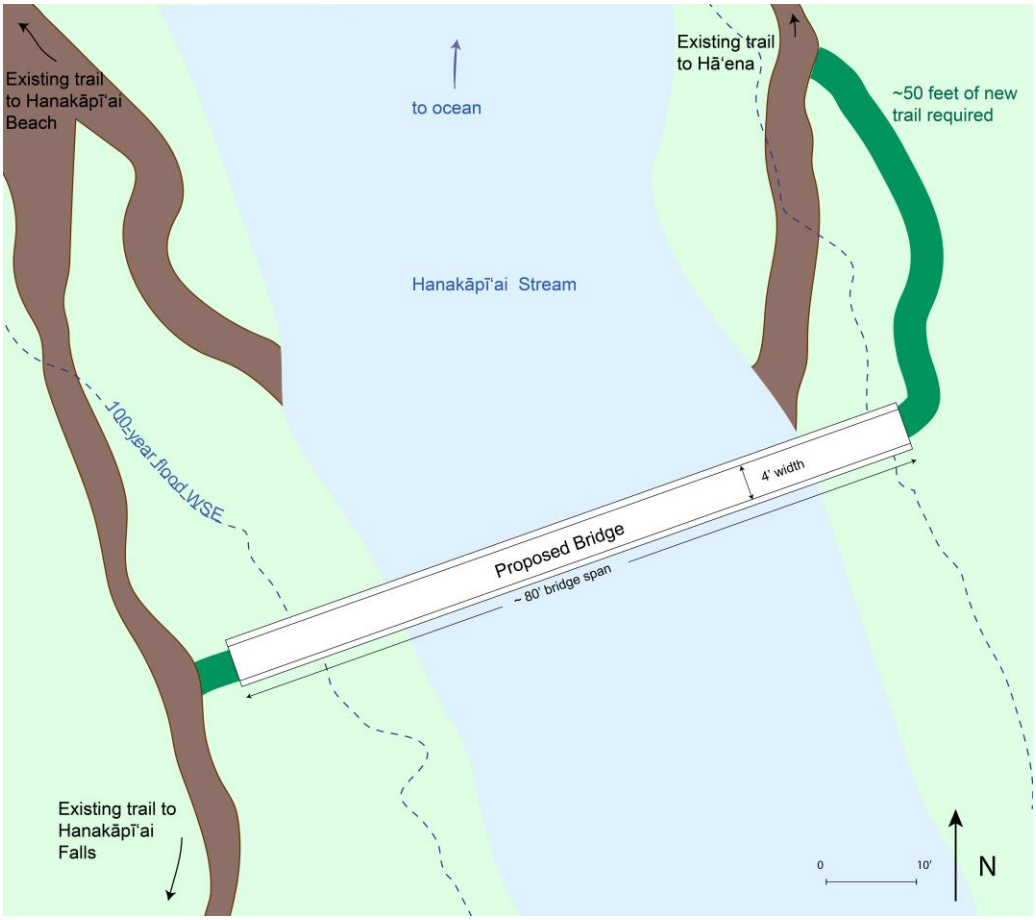


Figure 1 Approximate proposed bridge alignment site diagram. See draft bridge design drawing on page 9 for more detail.

The bridge would have a shallow deck and not require any piers, since it would clear-span the stream. Its lightweight design would allow for reasonably sized concrete abutments, a reduced number of micropile supports and minimal amount of excavation during construction. The bridge would be fabricated in

three segments and flown to the site by helicopter, where it would be field bolted together in a relatively short duration of time.

The proposed bridge alignment is offset from the trail on the east bank to avoid obstructing the historical route of the Kalalau Trail and would require approximately 50 feet of new trail to connect the bridge to the existing trail.

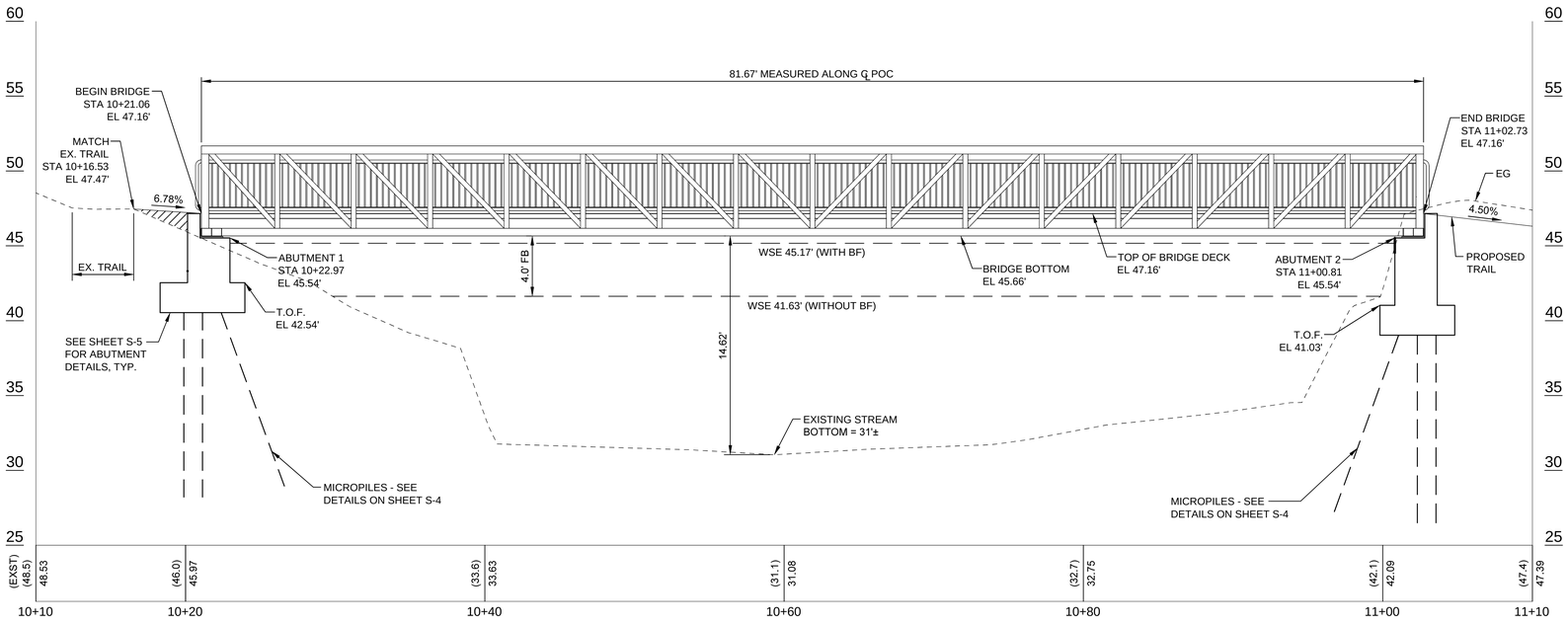
The expected cost of the proposed bridge is $106,500. The estimated total project cost is $506,000, including abutments, micropiles, trail improvements, helicopter installation, and construction.

Construction is expected to take approximately 10 weeks or 50 working days. An approximate construction schedule, targeted for early 2018, would be:

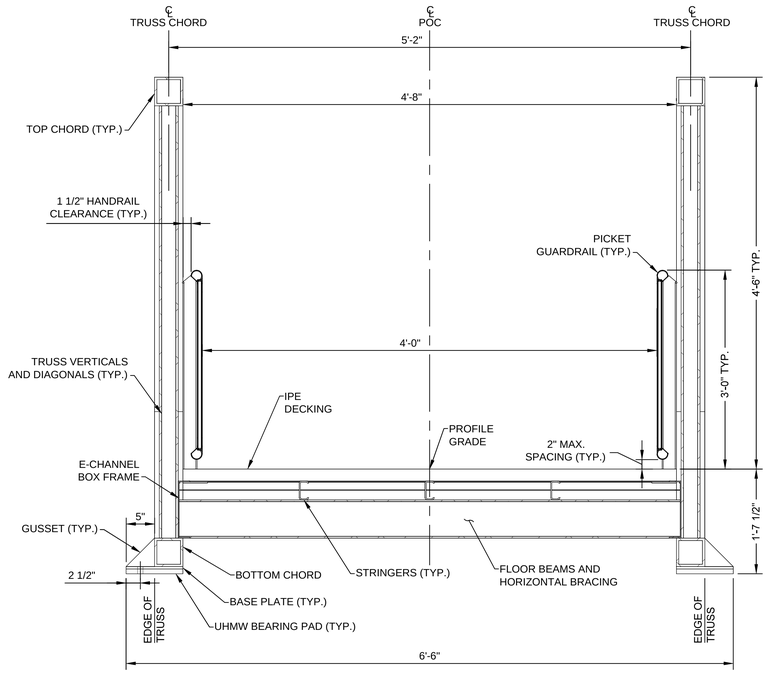
- 1 week for mobilization
- 1 week for site-prep
- 1 week for micropile installment
- 2 weeks for abutment installment
- 2 weeks for preparation and installation of bridge superstructure
- 2 weeks for miscellaneous work and trail improvements
- 1 week for demobilization

The construction area will be accessed by helicopter and by foot along the Kalalau Trail. Given the lack of utilities available in Hanakāpīʻai Valley, the construction activities will be performed without access to electricity and running water. All waste will be packed out by foot or by helicopter.

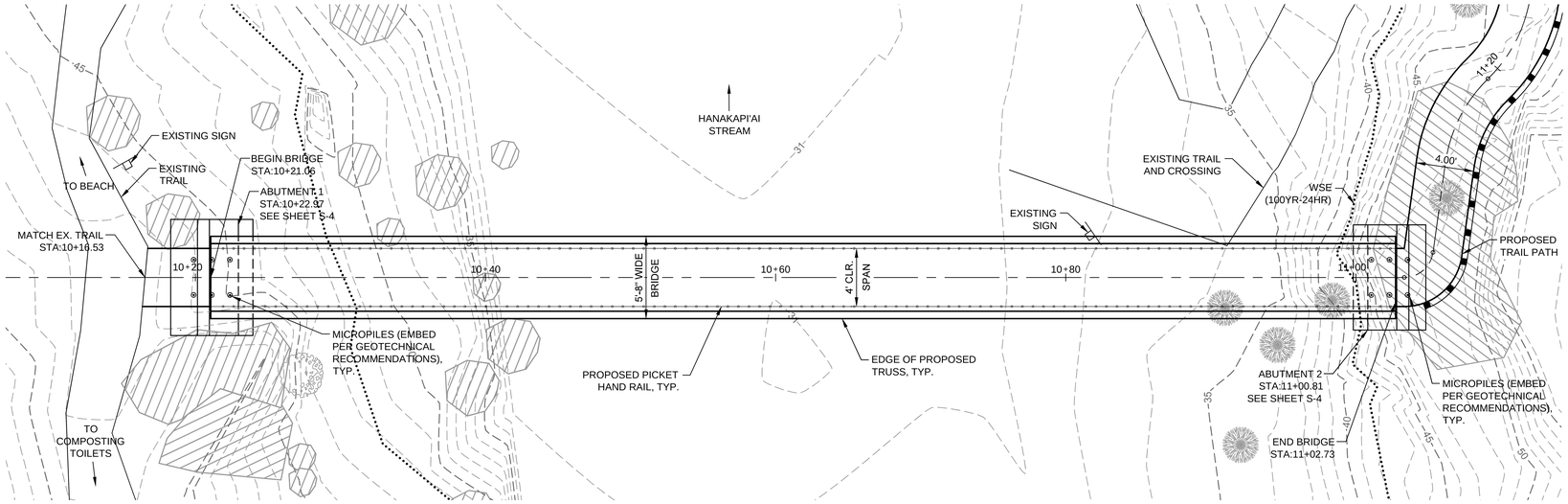
Figure 2 Rendering of approximate proposed bridge structure and alignment.



BRIDGE PROFILE
SCALE: HORZ 1" = 5'
VERT 1" = 5'



TYPICAL SECTION
SCALE: NTS



BRIDGE PLAN

LEGEND

- EXISTING ROCK OUTCROPPING OR BOULDER
- TRAIL PATH PER CIVIL PLANS
- WSE (100YR-24HR)
- GUAVA TREE
- HALA TREE

NOTE

1. STATION LINES ARE FOR CONSTRUCTION PURPOSES ONLY.
2. CONTROLLING DIMENSIONS FOR TRUSS ARE SHOWN. THE CONTRACTOR SHALL FURNISH TRUSS DESIGN, CALCULATIONS AND SHOP DRAWINGS. SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
3. TOP AND BOTTOM TRUSS CHORDS ASSUMED TO BE 6" WIDE, CONTRACTOR TO VERIFY.
4. TOP OF HANDRAIL GRIPPING SURFACE SHALL BE MOUNTED BETWEEN 34" AND 38" ABOVE BRIDGE DECK PER ADAAG 4.8.5(5) AND TITLE 24 1133B.5.5.1.
5. REFER TO SHEET C-2 FOR TRAIL GRADING.
6. ELEVATIONS OF THE EG ARE APPROXIMATE AT THE TIME OF THE SURVEY

N

0 2.5' 5' 10'
SCALE: 1" = 5'

DESIGN CRITERIA FOR PRE-ENGINEERED BRIDGE (BY OTHERS):

THE PRE-ENGINEERED PEDESTRIAN ALUMINUM TRUSS BRIDGE SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES, REFERENCES, AND PARAMETERS. FOR ALL OTHER INFORMATION NOT LISTED HERE, REFER TO THE SPECIFICATIONS FOR ADDITIONAL DESIGN AND CONSTRUCTION REQUIREMENTS.

DESIGN CODES AND REFERENCES:
-AASHTO LRFD BRIDGE DESIGN SPECIFICATION. 7TH EDITION (2014)
-ALUMINUM DESIGN MANUAL(LATEST EDITION)
-AISC MANUAL OF STEEL CONSTRUCTION. 14TH EDITION
-INTERNATIONAL BUILDING CODE 2006, EXCEPT AS MODIFIED BY BUILDING CODE OF THE STATE OF HAWAII

FOR DEAD,LIVE, SEISMIC AND WIND LOADING, SEE SHEET S-1 AND SPECIFICATIONS FOR FURTHER INFORMATION.

MATERIAL PROPERTIES:
ALL PRIMARY STRUCTURAL MEMBERS SHALL BE 6061-T6 (HIGH STRENGTH AND CORROSION RESISTANCE) MINIMUM. SECONDARY MEMBERS SHALL BE 6000 SERIES MINIMUM. FOR ADDITIONAL REQUIREMENTS AND INFORMATION, REFER TO PROJECT SPECIFICATIONS.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

HANAKAPI'AI BEACH
BRIDGE IMPROVEMENT PROJECT

BRIDGE PLAN AND PROFILE

DESIGNED:	MO/MH	SUBMITTED:	
DRAWN:	MH	DATE:	2/16/2017
CHECKED:	JD	SCALE:	1" = 5'

APPROVED: _____ CHIEF ENGINEER _____ DATE

DRAWING NO. S-2

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1.2 Project Purpose and Need

State Parks has identified a need to reduce the risk posed by flash flooding of Hanakāpīʻai Stream to hikers on the Kalalau Trail and to the County and State personnel who respond to hikers needing emergency assistance. The purpose of the project is to reduce this risk and the need for emergency missions to rescue stranded hikers.

Because of the local topography, Hanakāpīʻai Stream is prone to flash flooding, causing many hikers to be unable to safely ford the stream and return to the trailhead. In recent years, the number of hikers becoming stranded by Hanakāpīʻai Stream flooding has increased, as has the number of air and ground rescue missions. A number of hikers have died trying to cross the stream in flooding conditions. In addition, rescue personnel put themselves at risk trying to help stranded hikers. This pedestrian bridge would significantly decrease the risk of hikers attempting to ford a flooded stream and the danger posed to Kaua'i Fire Department (KFD) personnel and other rescue responders while minimizing the costs to the County of Kauaʻi for conducting such rescues.

Hanakāpīʻai Beach is one of the most dangerous beaches on the island, with at least 30 drownings occurring since 1970 (Blay 2011). Strong rip currents swiftly pull swimmers away from the beach and down the coast to the west, where there is no safe beach access for over 3 miles. Hikers who try to cross the stream at high water levels can get washed out to sea and can be injured or can drown, such as the visiting hiker who drowned in February 2013 (Star Advertiser 2013).

The number of emergency calls to rescue hikers trapped on the far side of Hanakāpīʻai Stream have increased in recent years, due to the increase in the number of hikers and their varying skill levels to safely traverse the trail. Visitation to Hanakāpīʻai Beach and the Kalalau Trail has increased from 1,000 to 2,000 visitors daily (see Table 3-1). Additionally, KFD observes that stranded hikers are less likely to remain on the far side of a flooded river if rescuers are not going to retrieve them immediately, and instead attempt to ford the flooded stream. Previously, responders would immediately attend to stranded persons who were injured or in imminent danger, then wait for the flooding to recede to help the hikers out of the valley. Recently, however, an increasing number of hikers do not wait for the water to subside and have attempted to cross the flooded stream. These unassisted crossings put the hikers in great danger and increase the number of ground and air rescues performed by KFD to safely assist the stranded hikers (Personal Communication, KFD, 2015). For example, 121 hikers were rescued from Hanakāpīʻai Valley in April 2014 due to flooding, and 12 hikers required rescuing in February 2016.

This increase in rescue missions is costly and dangerous to both hikers and emergency responders. Most rescues to extract stranded hikers are done by helicopter during rough weather conditions. The helicopter, which is stationed in Līhue on the southwest side of the island, must fly over the mountainous center of the island to reach Hanakāpīʻai quickly. In poor visibility conditions, the helicopter flies around the mountains following the highway to reach Hāʻena. With the helicopter's limited fuel storage capacity, these long trips are dangerous for the pilot and passengers. Maneuvers within the narrow valley to pick up stranded hikers is the most dangerous part of the rescue mission for responders, with the potential to get blown into valley walls by strong winds (Personal Communication, KFD, 2015).

The KFD air rescues are costly. The KFD reported that the April 2014 rescue of 121 hikers cost the department an additional $3,560.68 in fuel and overtime costs. The actual total cost of the rescue is

higher since this estimate doesn't take into account equipment, maintenance and on-duty personnel that the KFD provides under its operational budget (Star Advertiser 2014). As air rescue operations increase for Hanakāpīʻai, the equipment and operational costs to KFD are significant.

Additionally, KFD's efforts to mount rescues in Hanakāpīʻai impact the KFD's ability to respond to other emergencies in the area. When rescuing stranded hikers at Hanakāpīʻai, KFD's Hanalei Fire Station deploys their engine and most of their personnel to the trailhead at Kēʻē Beach. The Kapa'a Fire Station is then responsible for responding to any emergencies in their own district and covering any emergencies in the Hanalei district. This may result in inevitable delays in KFD's responses to emergencies in the areas between Kapaʻa and Hanalei that occur during hiker rescue operations (Personal communication, KFD, 2015).

The proposed bridge across the Hanakāpīʻai Stream provides a practical response to the need to address the risks to both hikers and responders, and to reduce the financial and operational burdens on KFD. The pedestrian bridge intends to fill this need with minimal impacts on the cultural and natural environment in the Nāpali Coast State Wilderness Park and is not expected to increase the current usage and visitation of the park. The proposed bridge is a relatively cost-effective solution to the need through low-maintenance and damage-resistant design.

1.3 Addressing Impacts to Park Visitation

There is concern that constructing the proposed bridge across Hanakāpīʻai Stream will encourage more visitors to access Hanakāpīʻai Beach and further destinations along the Kalalau Trail, such as Hanakāpīʻai Falls. This impact is addressed in Section 3.10 with a summary of the impacts and mitigation measures provided here.

In recent years, there has been an increase in the number of visitors on the trail going to Hanakāpīʻai Beach and Hanakāpīʻai Falls, which can be attributed to an overall increase in visitors to Kaua'i, as well as increased recreation and physical activities such as hiking and promotion by social media and online destination sites. Section 3.10 discusses the increases in visitation in more detail.

The scenic route and coastal areas of Hanakāpīʻai are the attractions for most visitors, whereas the stream and proposed bridge are part of the trail system that connects visitors to these areas. Therefore, the relatively simple bridge design is not expected to be an added attraction to Hanakāpīʻai. The bridge is intended to provide a means for stranded hikers to get out of Hanakāpīʻai during times of high stream levels caused by severe weather events.

The two-mile hike from the Kalalau trailhead to Hanakāpīʻai is rigorous, and unprepared and inexperienced hikers are likely to be deterred and limited by the difficulty of the trail as opposed to the difficulty of crossing the 1-foot-deep stream. Therefore, the addition of the bridge will not make the trail significantly more accessible, and therefore attractive, to more hikers during non-flood conditions.

Under dangerous, flash-flooding conditions, the stream crossing becomes perilous and the addition of a bridge would make the crossing significantly more accessible. However, during these flooding times DSP would continue to enforce their trail closure protocol (explained in more detail in Section 3.10) to prohibit the entry of hikers to the park because of dangerous conditions that would remain in other sections of the trail. Therefore, the bridge would not increase park visitation during flood conditions nor

non-flood conditions. Extensive outreach is planned to ensure that all visitors are aware of these closures, dangers, and limitations.

Even with these trail closure procedures in place, it is still likely that hikers who have entered the park before the closure, or camped at Hanakoa or Kalalau the night before, will be isolated on the far side of the trail. The proposed bridge is intended to provide these hikers with a safe exit without the use of helicopters.

Management of increased visitors has been a focus of State Parks and is the center of the development of their *Hāʻena State Park Master Plan* (MP). Hāʻena State Park is adjacent to the Nāpali Coast State Wilderness Park and the increase of visitors is resulting in traffic and parking congestion and the continuing deterioration of trail and beach access areas in both parks. The MP process incorporated participation and collaboration with community representatives, cultural practitioners, descendants of families that resided in the park areas, and other stakeholders with involvement in Hāʻena State Park. MP strategies include but are not limited to managing the number of vehicles and visitors entering the parks and education and enforcement measures.

The proposed bridge is not expected to significantly increase visitation to Hanakāpīʻai in either flood or non-flood conditions. If and when elements of the Hāʻena Master Plan are successfully implemented, visitation to Hanakāpīʻai will likely decrease.

1.4 Environmental Assessment Process

This environmental assessment (EA) is prepared to fulfill the requirements under Chapter 343, HRS, the Hawaiʻi Environmental Policy Act (HEPA), and its implementing rules, Hawai'i Administrative Rules (HAR), Title 11, Chapters 200 and 201. This EA is triggered by the proposal to construct a structure lands classified in the Conservation District and use of State lands and State funds. DLNR is both the proposing agency for this action and is also the determining agency

On the basis of the analysis provided in this EA, DLNR has determined that the proposed action would not have a significant adverse impact on the human or natural environment. Preparation of an environmental impact statement is not needed and a Finding of No Significant Impact (FONSI) was issued.

All comments received during the HEPA process have been considered and incorporated in the final EA. Approval by the Chairperson of DLNR for a FONSI was requested. This FEA and FONSI are submitted for publication to the Office of Environmental Quality Control (OEQC).

Upon completion of the HEPA process, efforts will continue on the obtainment of the required permits for this project.

2 Alternatives

2.1 No Action

Under the No Action Alternative, the proposed pedestrian bridge would not be built across Hanakāpīʻai Stream. There would be no impacts to the environment. The safety concerns associated with the flooding of the Hanakāpīʻai Stream would persist and the current high cost of rescue operations would continue to burden the KFD.

2.2 Proposed Action

Under the Proposed Action, State Parks would install a pedestrian bridge spanning Hanakāpīʻai Stream as described in Section 1.1 and in more detail below. Through a review of similar existing bridges in the State of Hawaiʻi and other state parks in the country, a 4-foot wide bridge was determined to be sufficient for the anticipated foot traffic.

The proposed bridge type is a truss bridge, which has a frame of connected segments, called a truss. These connected segments form triangles that can support heavy loads with relatively little bridge material, making it a cost-effective option. There will be no supporting structures located in the stream. The vertical elevation was determined by the existing rock outcropping elevations and through a detailed hydrology and hydraulic analysis to allow for clear flow of the 100-year, 24-hour design storm.

Aluminum was chosen as the proposed material for this bridge because it has the advantage of being lightweight and having a high strength-to-weight ratio. It is durable and will not corrode due to the naturally occurring oxide layer that develops on the surface. This option provides a long-term, nearly maintenance-free structure that would reduce the cost of ownership significantly compared to other materials. The aluminum bridge would be covered in plastic wood composite decking and finished with a dark brown powder coating to better assimilate the bridge aesthetically within the natural landscape.

The bridge and reinforced concrete abutments would be supported on MAI-type micropiles, which consist of hollow shafts with a sacrificial drill bit. They are installed by drilling with air, water and/or light grout. After achieving the required depth, the piles are then grouted in place with higher strength grout. The advantage of using MAI type micropiles is that they are adept at drilling through highly variable soils, including boulders, which are found abundantly on the site. Additionally, MAI-type micropiles can be installed in sites with limited space, using light drilling equipment.

After construction of the substructure, the bridge superstructure would be installed. The truss style aluminum bridge would be pre-fabricated off-site, delivered in three segments, and flown in to Hanakāpīʻai Valley, where it will be field bolted together in a relatively short duration of time.

The bridge configuration would require a new section of trail, approximately 50 feet long and 4 feet wide, to be created along the hillside.

2.3 Alternatives Considered But Eliminated From Further Analysis

In addition to the proposed action, which is described in Section 2.2, DLNR considered the following alternatives.

Alternative Alignments. After a site visit, topographic survey and discussions with DLNR staff, several different alignments for the proposed bridge were reviewed. After reviewing the proposed alignments, the other alignments were eliminated from further analysis because they would not minimize adverse environmental impacts. The proposed alignment would minimize impacts to the existing trail, allow the existing historic trail route to remain accessible to visitors, avoid rock pavers on the trail, which are considered archeological resources, and use existing rock outcroppings for foundation supports. In addition, the proposed alignment ultimately was the shortest clear spanning option.

Alternative Trail. Consideration was given to reopening an abandoned trail section along the eastern (trailhead) side of Hanakāpīʻai Stream. It was suggested that this alternate route would allow for hikers to proceed both up and down the valley (from the falls) without requiring a crossing of the stream

during flood conditions. This alternative was not pursued for several reasons, most notably the fact that the vast majority of hikers access the beach as their final destination. Only a small percentage of visitors proceed up the valley seeking the waterfall. Those visitors seeking to reach the beach would still require a stream crossing. Additional obstacles include the environmental and construction costs of rebuilding over a mile of trail, and the fact that the trail never continued all the way to Hanakāpīʻai Falls – the route would still require multiple stream crossings further inland. For these reasons, this alternative was not pursued further in this analysis.

Design Alternatives. Several design alternatives were taken into consideration. Suspension and cable-stayed bridges were not considered as viable options due to encroachment issues and the large amounts of material required, making them cost-prohibitive. Because the bank-to-bank span is greater than 80 feet, only truss-type options were ultimately considered viable.

Alternative Materials. Three main alternatives were evaluated for the proposed material of the pedestrian bridge: steel, aluminum, and fiberglass. A wood structure was eliminated due to the high maintenance requirements and the remote location. Each option has advantages and disadvantages related to cost, durability, maintenance, aesthetic value, sustainability of construction materials, and ease of construction. Steel is a very durable material, given that most manufacturers use weathering steel or an enamel coating, however it is much heavier than the other two materials and would require more helicopter trips, and increase the project cost. Fiberglass-reinforced plastic (FRP) is a fairly cost-effective option due to constructability ease and lightweight structure, however this material experiences surface deterioration and color fading when exposed to constant sunlight. FRP material can also exhibit high amounts of creep (continued deformation) when subjected to sustained loading. For these reasons, steel and FRP were eliminated from further analysis.

Stream Gauge. Installing a stream gauge in Hanakāpīʻai Valley was considered but not pursued because the rapid nature of flooding in Hanakāpīʻai diminishes the usefulness of a stream gauge warning device. Even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore it is unrealistic to believe that predicative trail closures can prevent all hikers from entering dangerous conditions. A 19’x10’ shelter and an emergency supplies box have been installed in the valley and has been used by some hikers in inclement weather. However it has proven insufficiently comfortable for stranded hikers. One State Parks official had the experience of instructing stranded hikers to spend the night on the far side of the stream to wait until the flooding subsided. Later that evening, a couple of hikers decided to ford the stream in the dark of night on their own. These dangerous decisions will be continually combatted through education and other ‘more cost effective’ alternatives. However the proposed bridge provides a safe option that does not force the Kauaʻi County Fire Department to decide whether to rescue stranded hikers or hope they make safe choices on their own.

3 Affected Environment, Impacts, and Mitigation Measures

3.1 Climate

Hawaiʻi’s climate is characterized by mild temperatures, frequent northeasterly trade winds and highly variable rainfall. This weather attracts tourists to the islands but can also cause dramatic and dangerous localized storms.

Hawai‘i’s subtropical latitude results in a very small annual temperature range of less than 9°F in most areas of the state. The mild and consistently warm climate of Hawai‘i is one of the main contributors to the tourist industry in Hawai‘i, attracting tourists who seek outdoor activities such as swimming and hiking (Western Regional Climate Center 2016).

Precipitation in the Hawaiian Islands is largely driven by the orographic effect in which winds cause clouds to stack up on the windward side of mountains and precipitate. This causes rainfall on Kaua’i to be largely centralized around Mount Wai‘ale‘ale and nearby ridges, including the uplands of Hanakāpī‘ai (Shade 1995). Rainfall in Hanakāpī‘ai Valley ranges from around 100 inches annually near the mouth of the valley to over 130 inches annually in the upper valley, well above the state average of around 70 inches annually (Giambelluca et. al 2013; Western Regional Climate Center 2016). Rainfall is highest in November and March and lower in the summer months between June and September (Giambelluca et. al 2013). This rainfall comes mostly in light sprinkles punctuated by occasional heavy showers which can catch outdoor recreational users by surprise (Western Regional Climate Center 2016).

The proposed pedestrian bridge is not expected to have any impact on the climate.

Additionally, the installation is not expected to consume substantial energy in the construction or installation. Multiple helicopter trips will be required during installation, but the proposed bridge should limit the future need for helicopter evacuation, creating a net decrease in energy consumption. Thus the project is not expected to have a negative impact on anthropogenic climate change.

3.2 Geology, Topography, and Soils

The Nāpali Coastline is comprised of steep cliffs and narrow valleys of basalt rock that were formed by many centuries of erosion and faulting (Hawai‘i Coral Reef Assessment & Monitoring Program [CRAMP] 2008). This topography lends itself to flash flooding during heavy rain events as the rain is funneled into narrow valleys, such as Hanakāpī‘ai. The bridge site is located on rough mountainous terrain (United States Department of Agriculture [USDA] soil classification) with existing slopes of approximately 40% (Tetra Tech 2015).

The rock layer underlying lower Hanakāpī‘ai Valley is poorly permeable, which gives the stream a high runoff to rainfall ratio, meaning that more of the rain that falls in the watershed flows promptly into the stream as opposed to permeating into the ground (Shade 1995). During heavy rainfall this can cause water levels in the Hanakāpī‘ai Stream to rise rapidly and flood.

Hanakāpī‘ai’s steep valley slopes require the Kalalau Trail to follow several switchbacks down to the valley floor. Erosion of the slope is caused by hikers traveling off trail and runoff during rain events. For this reason, there are areas along the trail marked by signage instructing hikers to follow the trail to avoid further erosion of the hillside.

The locations of the abutments and micropilings of the bridge would be on steep slopes on either side of the stream. The MAI-type micropilings would be drilled with air, water, and grout, a good solution for drilling through the highly variable soils and rocks that are found within the site.

The proposed pedestrian bridge is expected to have negligible effects on the geology, topography, and soils of the project site because of the small footprint of the MAI-type micropiles and other substructure.

3.3 Hydrology and Water Quality

Hanakāpīʻai Stream is a perennial stream that flows from higher ground in the Hono o Nā Pali Natural Area Reserve to the ocean at Hanakāpīʻai Beach. The average slope of the main stream channel in the Hanakāpīʻai watershed is approximately 0.18% and the elevations range from 4,200 feet in the mountains to 4.12 feet at the beach (Tetra Tech 2015).

The State of Hawaiʻi Department of Health (DOH) monitors water quality parameters in state water bodies, which are published in Water Quality Monitoring and Assessment Reports every two years. In both 2012 and 2014, DOH had "insufficient data" for Hanakāpīʻai Stream on all water quality parameters usually monitored in water bodies (DOH, Clean Water Branch [CWB] 2012, 2014). Therefore, this Project is unaware of current water quality in the stream.

In Tetra Tech's analysis of the location's hydrology, it was found that the hydrology would not be affected by the presence of the proposed bridge. The stream's peak flow rate would not change for the post-development conditions because there would be minimal increase in impervious area, which would all occur outside the stream channel. The water surface elevation at the approximate location of the bridge would not increase because the bridge micropilings and abutments would be located outside of the bulked 100-year, 24-hour water surface elevation influence zone (Tetra Tech 2015).

The pedestrian bridge may have a positive impact on water quality in the stream by decreasing the turbidity caused by the hundreds of hikers walking through the streambed on a daily basis.

3.4 Biological Resources

Hanakāpīʻai Valley is densely vegetated and home to both native and introduced flora and fauna.

Flora

The vegetation in the valleys of the Nāpali Coast is transitioning from a previously agricultural or pastoral state to a new equilibrium, which is characterized by many exotic species. A survey of nearby Kalalau Valley found that because of previous cultivation and human occupation of the valley floor, exotic grasses and plants dominated, and native species grew only on the steeper valley walls and cliffs. The mouth of Hanakāpīʻai Valley, where the project area is located, was identified as less likely to harbor native species than the head of the valley because of increased human visitation (DLNR, Division of State Parks 1981). In a 2012 survey of native plants found within 6 feet of the Kalalau Trail, no native plants were identified along the trail in Hanakāpīʻai Valley (Pono Pacific Land Management 2012). Very few rare and endemic species are found on the valley floor now, and are dominated by more common trees such as hala (*Pandanus tectorius*) and guava, or kuawa, (*psidium guajava*) (Tangalin et. al 2012, Pono Pacific Land Management 2012).

Fauna

There are several native seabird species found along the Nāpali Coast such as the threatened ʻAʻo, Newell's shearwater (*Puffinus auricularis newelli*), and the endangered Hawaiian Petrel (*Pterodroma sandwichensis*) and the candidate species Band-Rumped Storm Petrel (*Oceanodroma castro*)(DLNR, Division of State Parks 1981). These and other migratory birds are protected by the federal Migratory Bird Treaty Act. The coast and upland forests are also important habitat for forest birds including the

endangered Kaua'i ʻākepa (*Loxops caeruleirostris*) and Kauaʻi creeper (*Oreomystis bairdi*) (DLNR, Division of Forestry and Wildlife 2011). The Hawaiian Hoary Bat (*lasiurus cinerus semotus)* is known to roost throughout the island of Kauaʻi in mixed native and non-native forest habitats. June to September 15 is the birthing and pup-rearing season. They will use trees that are greater than 15 feet in height to raise their young (Personal Communication, DLNR Division of Forestry and Wildlife 2016).

The Hanakāpīʻai Stream supports feeding habitat for two listed endangered waterfowl species: the Hawaiian Gallinule (*Gallinula c. sandvicensis*) and the Hawaiian Duck (*Anas wyvilliana*). The Hawaiian Coot (*Fulica alai*), Hawaiian Stilt (*Himantopus mexicanus*), Black-Crowned Night Heron (*Nycticorax nycticorax*) and the Hawaiian Goose (*Branta sandvicensis*) are not known to use the Hanakāpīʻai stream habitat due to frequent flash flooding and heavy human presence. However, if any of these birds are seen in the area, a locally trained avian biologist will be contacted for assistance (Personal Communication, DLNR Division of Forestry and Wildlife 2016).

Feral goats are found in Hanakāpīʻai Valley, which can be destructive to ecosystems through erosion and overgrazing (DLNR, Division of Forestry and Wildlife 2011). Feral pigs and Columbian black-tailed deer (*Odocoileus hemionus columbianus*) also contribute to erosion and degradation of the natural ecosystem. The streams of the Nāpali Coast are some of the few perennial streams to flow uninterrupted by channelization or other development to the sea (DLNR, Division of State Parks 1981). Hanakāpīʻai Stream and other streams along the coast were once rich with endemic species but more recently exotic aquatic fauna have taken over. An upper section of Hanakāpīʻai Stream, near Hanakāpīʻai Falls, provides critical habitat for Newcomb's snail (*Erinna newcombi*), which is a threatened species under the Endangered Species Act (ESA) (DLNR, Division of Forestry and Wildlife 2011).

Current Threats to the Ecosystem

There are several threats to the ecosystem in Hanakāpīʻai Valley. Plant species are at risk of being trampled by hikers widening trails or hiking off trail. This foot traffic can also cause erosion, further harming hillside flora. Hikers can also unknowingly spread seeds of invasive plant species, such as strawberry guava (*Psidium cattleianum*), on the bottoms of their shoes. Additionally, feral goats graze on many plant species, which tends to favor invasive species whose regrowth is quicker than endemic species (DLNR, Division of State Parks 1981). Presence of feral cat (*Felis catus*) colonies pose important threats to native birds, particularly sea and forest birds. As such, care will be taken not to perpetuate this problem in this project, including feeding cats or leaving food on the ground (Personal Communication, DLNR Division of Forestry and Wildlife 2016). Additionally, care will be taken to prevent the spread of Rapid Ōhiʻa Death by following guidelines laid out by the University of Hawai'i College of Tropical Agriculture and Human Resources.

Potential Impacts

The proposed bridge is not expected to have a significant impact on the flora and fauna of the project area. The bridge configuration would require a new section of trail, approximately 50 feet long and 4 feet wide, to be created along the hillside. This would have a minimal impact on the flora and fauna of the valley as a whole because no endangered or rare native species are found within the footprint of the project. Approximately 200 square feet of vegetation would need to be removed, including one native hala tree (*Pandanus tectorius*). This removal is considered insignificant for the ecosystem as a whole as

hala is found with relative frequency in Hanakāpīʻai Valley and elsewhere along the trail, as are the other vegetation in the project site.

To avoid impacts to the native Hawaiian Bat, the project will avoid cutting or removing trees greater than 15 feet in height during pup rearing season. If a tree needs to be removed from the project site or the helicopter landing zone during that time, the project will seek a knowledgeable wildlife biologist in Hawaiian Bats to be hired to survey the tree(s) prior to cutting.

Additionally, to avoid impacts to nocturnal seabird species, construction will not occur at night. If it appears that birds colliding with the bridge becomes an issue, reflective tape may be used to mitigate this impact.

The bridge is not expected to have an impact on the native forest bird or seabird populations as they are not commonly found in the immediate project area. Because the bridge was designed such that the entire structure would remain outside of the stream channel, the aquatic environment is not expected to be impacted.

3.5 Natural Hazards

There are several natural hazards in Hanakāpīʻai Valley that must be considered for the safety of hikers and the sustainability of the proposed bridge. As explained in Section 3.2, the low permeability of soil in Hanakāpīʻai Valley contributes to the occurrence of flash floods. In addition, the steep valley walls contribute to erosion, especially along the well-traveled path. For these reasons, the bridge's substructure would be located outside of the stream channel and the crossing would be higher than the projected water surface elevation during a 100-year flood.

Sea level is projected to rise across the globe in the next century due to climate change, potentially rising over 3 feet by the year 2100 in the Hawaiian Islands (Fletcher 2010). At an elevation of approximately 44 feet above mean sea level and around 300 feet inland of the shoreline, sea level rise would not affect the proposed bridge (National Oceanic and Atmospheric Administration [NOAA] 2016).

Whereas sea level rise impacts projections are relatively consistent, downscaled models for precipitation in the Hawaiian Islands are still variable in location and intensity. In the absence of these projection by which to run the hydrological model, an effort was made to site the proposed bridge outside of a potentially expanded floodplain. A study of the hydrology of Hanakāpīʻai Stream was produced by Tetra Tech to understand the flow rates and water surface elevation that could result from a 100-year flood. The study modeled a 100-year flood using topographic data and historic100-year 24-hour rainfall data (defined as the amount of rain that has a 1% probability of falling within a 24-hour period in any given year). This model resulted in a peak water surface elevation (WSE) of 41.63 feet at the location of the proposed bridge. The proposed bridge bottom has an elevation of 45.63 feet, giving the bridge a freeboard of 4.0 feet, 1.0 foot above the County of Kaua'i minimum of 3.0 feet. All components of the bridge remain out of the path of the river in this modeled 100-year flood (Tetra Tech 2015).

When the 100-year flood is modelled with a bulking factor, which takes into consideration the increase in streamflow volume due to sediment being carried downstream, the bridge remains outside of the flooded river but by less than a foot (Tetra Tech 2015)

Hanakāpīʻai Beach has experienced wave run up in excess of 10 feet or 20 feet resulting from tsunamis originating in the Aleutian Islands in the Northeast Pacific (Walker 2004). The proposed alignment of the

bridge is safely inland of these past run-up areas and the proposed bridge is not likely to be affected by tsunamis.

3.6 Visual Resources

Hanakāpīʻai Valley is narrow and deep with many attractive vistas and is known for its natural scenery. The beach is sandy in the summer and rocky in the winter with impressive waves and several sea caves near the shoreline. The Hanakāpīʻai Falls Trail follows the usually clear, calm stream up the valley, passing through lush vegetation, remnants from taro terraces and an abandoned coffee mill. The view of Hanakāpīʻai Falls, a dramatic 300-foot waterfall, at the end of this trail is what drives many visitors to complete the 8-mile roundtrip hike. According to a 2007 Hawaiʻi Tourism Authority report, 73% of park users visit Hawai'i State Parks for the scenic views and photographs (OmniTrak Group Inc. 2007).

Hanakāpīʻai Valley remains a relatively undeveloped area, with the exception of the existing composting toilets and shelter. The installation of a bridge would introduce an additional man-made feature and alter some views in the area. The bridge will not be visible in many areas due to the dense foliage of the valley. In recognition of this impact, the proposed bridge materials and design were selected to mitigate this impact to the extent possible. The aluminum bridge would be finished with a dark brown powder coating to better assimilate with the color palette of the forest and stream banks. Additionally, a plastic wood composite decking is proposed to cover the walkway of the bridge, adding a more natural aesthetic to the bridge. In conclusion, the bridge would unavoidably alter the visual resources of the project area, but mitigation measures have been included to have minimal encumbrance on the visual landscape.

3.7 Air Quality

Air quality in Hawaiʻi is generally good with trade winds helping to disperse pollutants. On Kauaʻi Island, air quality is monitored at a station in Niumalu, south of Līhue on the southeast side of the island. DOH has not reported exceedances of the National Ambient Air Quality Standards at this station in the last 5 years (DOH Clean Air Branch 2016).

Construction of the Project would result in minor short-term adverse impacts, including construction-generated emissions, such as exhaust from helicopters bringing equipment to the site. Construction would last approximately 10 weeks, so emissions would be limited in magnitude and duration. Emissions would not cause the area to exceed federal or state ambient air quality standards. Upon completion of construction, the Project is not expected to generate air emissions. Long-term, air emissions would be reduced compared to current conditions since fewer helicopter trips would be needed to rescue stranded hikers. No mitigation measures for air quality are necessary or proposed.

3.8 Noise

Due to its isolation from development and inaccessibility for most vehicles, Hanakāpīʻai Valley has minimal human-produced noise. This relative absence, leaving ambient noise to be dominated by the sounds of wind, waves, and fauna, is one of the draws of visitors to the site. Therefore the introduction of human-produced noise from other hikers (such as music players) and helicopters passing overhead detract from the value of the place.

DLNR, Division of State Parks recorded noise from helicopters in order to quantify its effects. Testing in nearby Hanakoa Valley showed that a helicopter passing at 500 feet above an observer produced a noise level 62 decibels adjusted (dBA), which is well above the background sound level of 48 dBA in that area.

The noise levels increase to around 90 dBA when within 100 feet of a helicopter (DLNR, Division of State Parks 1981).

Construction of the Project would result in short-term, minimal adverse impacts. Construction activities would generate noise that would be audible on the trail and in the surrounding area. This noise could be perceived as a nuisance to hikers but would attenuate (lessen) with distance from the construction area. Construction noise would last approximately 10 weeks. Once construction was complete, the project would not produce noise and noise levels would return to their current state. Long-term, human-produced noise levels would be reduced compared to current conditions since fewer helicopter trips would be needed to rescue stranded hikers. No mitigation measures are necessary or proposed.

3.9 Socioeconomic Environment

There are no residents living in the surrounding area of the Nāpali Coast State Wilderness Park. The nearest population center is Hā‘ena, located east of Hā‘ena State Park. Hā‘ena had a population of 431 people in 2010. The population of Kaua‘i County was 67,091 people in 2010 (U.S. Census Bureau 2010).

The Project would improve health and human safety in the Nāpali Coast State Wilderness Park, which would benefit local park users and Kaua‘i County as a whole by minimizing the financial burden of KFD rescue missions. Construction and operation of the Project would have no short- or long-term adverse impacts on socioeconomics. Impacts on population or the local economy are not anticipated. Project construction would last approximately 10 weeks and maintenance trips after installation would be minimal. Therefore, the Project would not measurably affect the local population’s welfare. No mitigation measures are necessary or proposed.

3.10 Recreational Use and Health and Human Safety

The Nāpali Coast is highly appreciated by both visitors and Kaua‘i residents alike for its scenic beauty, recreational opportunities, and social and cultural significance. People visit the coastline by boat, by air and on foot. As the Kalalau Trail sees increased foot traffic, particularly by inexperienced recreational users, the issue of health and human safety has become a more prominent public burden.

The Nāpali Coast is promoted to visitors as a recreational and scenic area worth visiting. It is described as “one of the precious jewels in the crown of the Hawaiian Islands” in Kaua‘i’s Official Guide Map provided to visitors by the Kaua‘i Visitor’s Bureau (KVB). A photo of the Nāpali Coast is featured on the cover of the 2015/2016 Official Travel Planner for Kaua‘i by the KVB and the area is a “Featured Attraction” in the publication described as epitomizing “epic beauty.” The Nāpali Coast is also the backdrop for several popular movies, which is advertised in brochures for visitors and contributes to visitation to the coastline.

Viewing natural scenery and experiencing the recreational opportunities therein are considerable attractions for tourists to visit the island, according to a survey conducted by the KVB. Of the visitors surveyed, 83% were motivated to visit Kaua‘i in part by natural beauty/scenery, and 39% were motivated in part by adventure activities (KVB 2014). In the same survey in 2014, 25% of visitors were satisfied with the island’s parks and 61% of visitors were *very* satisfied with the parks. Forty one percent of respondents report hiking during their visit. Of the respondents, 59% report having visited the Nāpali Coast in some form.

State parks across the islands remain highly important and frequented venues for public recreation. According to a 2007 Hawai’i Tourism Authority Report, Hawai‘i state parks had a total of 10,140,300

users that year. They represent a strong draw for visitors, as 67% of park users were out-of-state visitors. The Nāpali Coast State Wilderness Park was the ninth most visited state park, out of 55 state parks in Hawai'i, with 423,100 visitors in 2007 (OmniTrak Group Inc. 2007). Estimates of visitation of the Nāpali Coast State Wilderness Park have increased in the last 20 years from less than 500 daily visitors in peak season in 1993 to over 2,000 daily visitors in 2011.

Table 3-1 Past Hā'ena State Park Visitation Records. Adapted from Hā'ena State Park Master Plan 2015.

Year	Month/ Season	Day of the Week	Visitors per day	Source	Notes
1993	Off-peak	NP	50 (average)	The Keith Companies 2001	NP
1993	August	NP	353 (average)	The Keith Companies 2001	NP
1998	September	Friday	1,501	Stepath 1999	NP
1999	NP	NP	1,700	Stepath 2006	NP
2008	August	Holiday weekend	1,950 (estimate)	ATA 2013	Estimated based on 2.5 persons per vehicle
2010	February	Wednesday	1,247 (estimate)	DLNR Division of State Parks	Counts only conducted from 9:00 am to 4:00 pm. Estimated based on 2.5 persons per vehicle.
2011	July	Monday	2,028 (761 cars)	UH Hawaiian Studies (informal count)	Measured from 6:00 am to 6:30 pm. Includes 8 on bicycles, 14 hikers, 5 joggers, 20 pedestrians.

Notes:
Full references for all sources are included in the references section.
ATA Austin Tsutsumi & Associates
DLNR Department of Land and Natural Resources
NP Not Provided
UH University of Hawai'i

Risks to health and safety at Hanakāpī'ai have increased alongside this increase in visitation. In efforts to minimize injuries and death related to flooding in the region, several agencies have tried to increase awareness about safe practices. In a pamphlet produced by the Hawai'i Tourism Authority (HTA) entitled "Tips for a Safe Vacation", it is noted that "island rainstorms can occur quickly and even brief downpours can cause flash floods. If the water level suddenly rises in a creek, drainage canal or other waterway, head immediately for higher ground" (HTA n.d.). Hanakāpī'ai Beach is recognized as one of the most dangerous beaches on the island and ocean safety tips are provided in a brochure produced jointly with the Kaua'i Lifeguards Association, KFD Ocean Safety Bureau, and several other partners and sponsors.

During heavy rain and flash flooding events, the bridge would provide a safe option for hikers to leave Hanakāpī'ai. The intent is to reduce the risk of hikers trying to cross a flooded stream that may potentially sweep them out to the ocean, where many drownings have occurred. For hikers that choose not to exit Hanakāpī'ai due to exhaustion and lack of water and supplies, a shelter has been built on the far side on the stream and emergency water and provisions are stocked by KFD in a secured area to

accommodate these hikers. The bridge is intended to provide a safety factor for hikers, eliminating strandings and the associated risk of attempting a dangerous stream crossing, and for rescue responders, eliminating the need to extract stranded hikers.

The construction of this proposed pedestrian bridge may require temporary, intermittent trail closures during installation. For instance, on days when the bridge segments are flown to the site, the trail may need to be closed for several hours or all day. Because the proposed bridge is offset from the current trail, construction activities are not expected to obstruct trail traffic constantly as other previously considered bridge alignments might have. Construction is not expected to require more than a few days of intermittent closures, therefore secondary impacts of deterred hikers were not considered significant. This impact may occur during some portions of the 10-week installation period but will cease after construction.

In the long-term, this Project is not expected to alter recreational use in the Nāpali Coast Wilderness State Park. It is unlikely that the bridge would cause an increase in foot traffic under normal conditions, because the Hanakāpīʻai Stream crossing is approximately 1-foot deep with relatively slow moving water, which is manageable for most hikers who have the fitness and balance to traverse the first 2 miles of the Kalalau Trail to reach Hanakāpīʻai. The crossing becomes dangerous only under heavy rain conditions and the bridge is intended to provide a safe option to leave this section of the trail.

Trail closures, on-trail DSP personnel, and permit enforcement will continue as they have in the past and even increase in the future. During periods of dangerous flooding in Hanakāpīʻai, most hikers would not have access to further dangerous conditions on the far side of the stream because most hikers would be deterred from park entry by the trail closure in place. What the existing protocol cannot account for is the safety of the hikers who may have entered the park before flooding was recognized by DSP. For these individuals, the proposed bridge is needed to provide a safe way to exit the park. A greater understanding of DSP's trail closure protocol may elucidate the need for a bridge in addition to trail access management.

Existing trail closure protocol requires a DSP staff member to hike into Hanakāpīʻai Valley to assess the level of flooding in Hanakāpīʻai Stream, after which a trail closure decision is made. This in-person trail closure protocol is required, as opposed to a remote, predictive determination for two reasons: (1) the localized nature of flooding in Hanakāpīʻai, i.e. flooding in neighboring Hanalei cannot be used as an indicator of flooding in Hanakāpīʻai; and (2) the rapid nature of flooding in Hanakāpīʻai, i.e. even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore it is unrealistic to believe that predicative trail closures can prevent hikers from entering dangerous conditions. The existing trail closure system equally cannot ensure the safety of those hikers who have started hiking the trail before the DSP staff reached Hanakāpīʻai stream, or those who are hiking out of Kalalau or Hanakoa valleys after camping the night before.

For these isolated hikers, the proposed bridge would grant them safe passage across the stream, eliminating the need for expensive and dangerous helicopter rescue missions.

Dangerous conditions beyond the initial stream crossing, including multiple stream crossings along the Hanakāpīʻai Falls Trail, can threaten hiker safety. It is for this reason that the DSP's existing protocols for closing the trail will remain intact even with the bridge installed. In DSP staff's experience, trail closure

is an effective way to keep people from accessing dangerous conditions on the trail. This is the foundation for DSP's statement that the installation of the bridge will not increase park visitation on days of inclement weather. For those hikers, mentioned above, that may enter the trail before trail closure, DSP plans to increase signage and other outreach efforts to inform them of the dangers upstream. Additionally, the installation of the bridge can allow State Parks staff to cross the stream to assist and direct hikers on the far side of the stream, instead of having to shout across the stream as they now have to.

Under normal, non-flood conditions, the 1-foot deep Hanakāpīʻai Stream crossing does not pose a significant obstacle to those hikers with the physical ability to traverse the 2-mile trail to reach Hanakāpīʻai. In DSP's experience, very few hikers decide not to cross the stream once they have reached it. Therefore, it is not believed that because of the proposed bridge that more hikers would be able to access Hanakāpīʻai Beach.

The purpose of the bridge is to serve these 'prior entrants' – offering them a safe exit without the need for fording the stream or rescue by helicopter.

Camping permits are required for those traveling beyond Hanakāpīʻai, and the streams in those areas do not pose the same safety risk. The number of hikers in these areas are not expected to increase due to the proposed bridge.

3.11 Public Facilities and Utilities

Due to Hanakāpīʻai's remoteness and location within a state wilderness park, there are few public facilities and no utilities. Existing composting toilets serve the visitors to Hanakāpīʻai Beach.

A rain shelter, constructed in 2016 to replace a previous collapsed feature, exists just inland of the existing composting toilet to provide minimal shelter to stranded hikers.

As noted in Section 3.10, the proposed bridge installation is not expected to increase use of the area, and therefore the Project is not expected to have any impacts on public facilities and utilities.

3.12 Historical and Cultural Resources

The impact of the proposed bridge on manmade features in the area dating from antiquity can be determined by an examination of the cultural, historical, and archaeological records as presented in Appendix C of this document.

As the DLNR does not currently provide leases for anyone to live or farm in the *moku* of Nāpali as the government allowed in 1938 and earlier—apart from cabins on the mountaintop in the area around the Kōkeʻe State Park—cultural practices in the *moku* are limited to hiking, camping with permit, hunting with permit, fishing, and gathering of foliage for cultural practices, such as *lāʻau lapaʻau* (traditional herbal medicines and practices), hula, or for various types of material culture. The nonprofit organization, Nāpali Coast ʻOhana (napali.org), has a stewardship agreement to study, maintain, and restore cultural sites in the *moku* and currently focuses its work on the *ahupuaʻa* of Nuʻalolo (both the *ʻili* of Nuʻalolo Kai and Nuʻalolo ʻĀina) and Miloliʻi. Formerly, the ʻOhana also worked to help maintain cultural sites in Kalalau. It is possible the group could consider doing the same at Hanakāpīʻai or perhaps another similar type group could endeavor to maintain and/or restore cultural sites in Hanakāpīʻai. Such opportunities open the door for the full range of cultural practices to be done in the *moku* as done

around Kaua‘i. Such has been the case at sites the ‘Ohana has done its work and a great many people from around Kaua‘i and beyond have benefitted from these opportunities.

Given the location of identified features by archeological data presented in Tomonari-Tuggle (1989) and the various *wahi pana* described in Appendix C, and given the topographical and geographical features deemed most appropriate to anchor the two ends of the spanning bridge for stability, the proposed spanning bridge does not appear to infringe or otherwise disturb manmade features in the immediate area of the proposed bridge. Features *ma uka* and *ma kai* of the proposed foundation of the bridge on both the east and west sides of Hanakāpī‘ai Stream are located several meters away and therefore should remain intact.

As this project moves forward, should any *iwi kupuna* or Native Hawaiian cultural deposits be identified during ground altering activities related to this project, all work will immediately cease and the appropriate agencies, including the Office of Hawaiian Affairs (OHA), will be contacted pursuant to the applicable law.

3.13 Secondary and Cumulative Impacts

Secondary impacts are those impacts that manifest as an indirect result of the proposed bridge. Cumulative impacts are those that manifest as a result of this action in the context of other actions, past present and future, at the same location.

With increased visitors to the Hā‘ena State Park and the Nāpali Coast State Wilderness Park and their impacts upon park resources, DLNR recognizes the need to manage this situation. A proposed Management Plan for Nāpali Coast SWP will provide the guidance on management options supported by the community. In concert with implementation of the Hā‘ena State Park Master Plan, this will regulate visitation, because increased traffic on the trail could result in degradation of the natural environment and cultural resources as well as a diminished sense of isolation and immersion in nature that many hikers seek in the state park. The Division of State Parks, however, does not believe that keeping the dangerous conditions at Hanakāpī‘ai Stream is the best way to manage park usage. Abstaining from constructing a bridge at Hanakāpī‘ai Stream would not be the most effective way of managing visitation because visitors have already invested effort in hiking the two miles to reach Hanakāpī‘ai Valley. They are presently undeterred by the inconvenience of fording the stream. The ideal place, however, to regulate visitation is at the trailhead at Hā‘ena State Park, which is being proposed by the Division of State Parks (Personal Communication, Division of State Parks, 2015).

In the case that the proposed bridge causes an increase in the number of visitors, the issue of managing park visitation is already being addressed by the Division of State Parks through the Hā‘ena State Park proposed MP and associated Draft Environmental Impact Statement submitted in July 2015. In the MP, the Division of State Parks cites an increasing number of visitors over the past 30 years which could have detrimental effects on the natural and cultural resources in the area (see Table 3-1). In response, Hā‘ena State Park proposes for the first time to impose limits on the number of visitors allowed to enter the park to 900 people per day. Because hikers have to pass through Hā‘ena State Park to reach the Kalalau Trailhead, access to the trail and Hanakāpī‘ai would be limited to 900 daily visitors as well. (DLNR Division of State Parks 2015). Because the timeframe of getting the MP approved and then implemented is longer than that of this bridge approval and construction, there would likely be a period during which the bridge exists but the limitations do not. Given the urgency of the health and human safety threat,

the bridge is needed to improve the safety of hikers in the park and decrease the cost of rescuing stranded individuals.

4 Relationship to Government Plans and Policies

In this section, several relevant plans and policies from the State of Hawai‘i and the County of Kaua‘i are described in relation to the proposed action.

4.1 Hawai‘i State Plan

The Hawai‘i State Planning Act, codified in HRS Chapter 226, established the Hawai‘i State Plan, which guides development, resource protection and other actions of state agencies through goals, objectives and policies. The overall themes of the Hawai‘i State Plan, which guide policies of the plan, are: independence and self-sufficiency; social and economic mobility; and community well-being, including the preservation of “social, economic and physical environments that benefit the community as a whole” (HRS Section [§] 226-3). The proposed pedestrian bridge aligns with these themes of the Hawai‘i State Plan by allowing safe access to recreational opportunities for all users while having a minimal impact on the adjacent natural environment.

4.2 Hawai‘i State Land Use Law

The Hawai‘i State Land Use Law, passed in 1961 and codified as HRS [§] Chapter 205, established the State Land Use Commission (LUC), which determines the zoning of all land in the state into four categories: Urban, Rural, Agricultural and Conservation. Within Conservation Districts, land is classified as one of five subzones based on environmental sensitivity: Protective (most sensitive), Limited, Resource, General (least sensitive) and Special. The LUC has identified appropriate and allowed land uses within each of these subzones. The Project site is within the Conservation District, Resource Subzone, which has the objective to “ensure with proper management, the sustainable use of the natural resources of those areas” and has identified uses that fall within that objective (HAR [§] Chapter 13-5). According to the Office of Conservation and Coastal Lands (OCCL), who administrates the Conservation District rules, the proposed pedestrian bridge is an identified land use pursuant to Section 13-5-22, 7-9 (B-1). Construction or placement of structures accessory to existing facilities require a Sit Plan Approval, which is granted through OCCL. Hawai‘i Coastal Zone Management Program

The Hawai‘i Coastal Zone Management (CZM) Program (HRS Chapter [§] 205A-2) complies with the federal Coastal Zone Management Act of 1972 (16 USC § 1451-1456). It is designed to protect valuable and vulnerable coastal resources. The CZM area includes all of the lands in the state, and thus, includes the Project. The SMA permitting process, with which the Project is conforming, is a component of the CZM Program. A discussion of the Project’s consistency with the objectives and policies of the CZM Program follows:

Recreational Resources

The objective and policies for recreational resources address providing coastal recreational opportunities to the public. The Project would not alter the current coastal recreational opportunities in the area and would improve the safety of public access. Therefore, it would be consistent with the objective and policies for recreational resources.

Historic Resources

The objective and policies for historic resources address preserving and enhancing significant historic and prehistoric resources. As discussed in Section 3.12, cultural, archaeological, and historical research for the Project, determined that the proposed bridge would not alter any known historic and cultural resources at the site. The surrounding area contains multiple historic properties, but these would not be adversely affected by the Project. Therefore, the Project would be consistent with the objective and policies for historic resources.

Scenic and Open Space Resources

The objective and policies for scenic and open space resources address preserving, and, where desirable, enhancing the quality of coastal scenic and open space resources. As described in Section 3.6, the Project would result in minor to moderate adverse visual impacts. The proposed bridge structure and materials took into consideration this impact and employed mitigation measures to minimize this impact to the extent possible. Therefore, the Project would be consistent with the objective and policies for scenic and open space resources.

Coastal Ecosystems

The objective and policies for coastal ecosystems address protecting these valuable resources. The Project is approximately 300 feet inland and would not have an adverse impact on the shoreline ecosystem. The project would have a minor impact on the biological resources through removal of vegetation in the bridge and proposed trail footprint. No rare or endangered species would be removed, however, so the impact to the ecosystem as a whole is considered negligible. Therefore, the Project would be consistent with the objective and policies for coastal ecosystems.

Economic Uses

The objective and policies for economic uses address the development of public and private facilities and improvements, primarily coastal-dependent development, in suitable locations. As previously stated, the proposed pedestrian bridge is an allowable Public Purpose Use in Conservation District, Resource Subzone lands, with a permit approved by the Board of DLNR. According to OCCL, the project requires a Site Plan Approval prior to any construction taking place. Therefore, the Project would be consistent with the objective and policies for economic uses.

Coastal Hazards

The objective and policies for coastal hazards address hazards associated with tsunamis, storm waves, stream flooding, erosion, subsidence, and pollution. The Project is outside the tsunami inundation zone and potential areas vulnerable to projected sea level rise. The design and alignment of the bridge took into consideration the potential for a 100-year flood. There is no danger of subsidence or point or nonpoint source pollution hazard for or from the Project. Therefore, the Project would be consistent with the objective and policies for coastal hazards.

Managing Development

The objective and policies for managing development address improving the development review process, communication, and public participation. DLNR Division of State Parks' communication and public participation efforts are described in Consultations, Section 8 of this document. During the planning process, State Parks has engaged regulatory agencies, community groups, and other

stakeholders and responded to their comments and questions. Therefore, the Project would be consistent with the objective and policies for managing development.

Public Participation

The objective and policies for public participation address stimulating public awareness and participation. State Parks' public outreach and participation efforts are described in Consultations, Section 8 of this document. During the planning process, State Parks has engaged stakeholders and responded to their comments and questions. Therefore, the Project would be consistent with the objective and policies for public participation.

Beach Protection

The objective and policies for beach protection address protecting beaches for public use and recreation. The Project area is approximately 300 feet inland from Hanakāpīʻai Beach. The proposed bridge would not contribute any pollution that could affect the beach downstream. Therefore, the Project would be consistent with the objective and policies for beach protection.

Marine Resources

The objective and policies for marine resources address protecting and sustainably using and developing marine resources. No impacts to marine resources are anticipated from the Project. Section 3.3 of this document – Hydrology and Water Quality – addresses potential impacts to surface water, which are negligible. Therefore, the Project would be consistent with the objective and policies for marine resources.

4.3 County of Kauaʻi General Plan

The County of Kauaʻi's General Plan (GP), first adopted in 1971 updated in 1984 and 2000, and currently under review and update, sets policies and guidance for development, both public and private, across the island with a long-term vision. The GP forms planning policies around: caring for land, water and culture; developing jobs and businesses; preserving Kauaʻi's rural character; enhancing towns and communities and providing for growth; building public facilities and services; and improving housing, parks and schools. This project is in alignment with the priorities outlined in the GP by improving safety of the Nāpali Coast Wilderness State Park while not impacting the natural and cultural environment.

4.4 Permits and Approvals

The following permits and approvals will be required prior to implementation of the Project.

- Special Management Area Use Permit from the County of Kauaʻi Planning Department
- Site Plan Approval from DLNR, Office of Conservation and Coastal Lands
- State Historic Preservation Division approval

5 Unavoidable Adverse Impacts

Construction would result in unavoidable short-term, localized, minimal adverse impacts related to air quality, noise, public access, and recreational use. Construction-related impacts would be temporary.

In the long term, the Project would result in minimal to moderate adverse impacts to visual resources. The Project would result in long-term, minimal adverse impacts to biological resources and negligible

impacts to air quality and noise.

The Project would also benefit the public by improving public safety for recreational users and emergency responders in the area while minimally altering or affecting the environment.

6 Irreversible and Irretrievable Commitment of Resources

A commitment of resources is irreversible when the primary or secondary impacts limit the future options for a resource. An irretrievable commitment refers to the use or consumption of resources that are neither renewable nor recoverable for future use.

The Project would require the irreversible and irretrievable commitment of fiscal, human, and material resources for its construction. These commitments would be minimal and are considered appropriate since hikers and emergency responders would benefit from improved safety on the trail.

A small area of land would be committed to the proposed bridge footprint; however, most of this commitment would not be irreversible or irretrievable since the land could be restored to a pre-Project state, if future conditions warrant. The above-ground structure of the bridge could be removed, as could the concrete foundation of the bridge supports. The micro-piles drilled into rock on both sides of the stream could not be removed, but the piles that extend above the rock surface could be cutoff nearly flush with the rock surface.

7 Determination

The proposed bridge installation is not expected to have any significant negative impacts on the environment. The site's climate, geology, topography, soils, hydrology, water quality, natural hazards, air quality, and historic and cultural resources are not expected to be affected by the Project. Minimal impacts on the site's flora and fauna, noise, air quality, public access and recreational use are expected to occur during construction and cease post-installation. The Project may have minimal lasting impacts on visual resources and recreational use, which will be addressed through mitigation measures. The Project is expected to positively impact health and safety.

Through its Chairperson, DLNR, the determining agency, has determined a FONSI for this EA pursuant to Chapter 343, HRS. This finding is based on the impacts and mitigation measures examined in this document and the analysis under the criteria in Section 11-200-12, HAR.

8 Consultations

8.1 Pre-Assessment Consultations

Pre-assessment consultation was conducted with stakeholders from local agencies and the community in Hā'ena in March 2015 to solicit feedback about the proposed stream bridge. The purpose of this scoping meeting was to solicit input from state and local agencies, organizations, and individuals with technical expertise, or that may have an interest in or be affected by the Project. Input received at this meeting was used to inform the content of the Draft EA. A list of agencies and other stakeholders who were contacted about this meeting and/or attended can be found in Appendix A.

8.2 Draft EA Comment Period

The Draft EA was published in the State of Hawai'i Office of Environmental Quality Control's *The*

Environmental Notice, on October 8, 2016, initiating a 30-day public comment period. Draft EA consultation letters were mailed to the parties identified in Appendix B, along with the publication date of the Draft EA.

The purpose of the Draft EA comment period is to coordinate with federal, state, and local agencies, organizations, and individuals with technical expertise or that may have an interest in or be affected by the Project. Comments received in response to the Draft EA consultation letters will be used to further refine the content of the Final EA. Copies of any comments received and responses will be included in an appendix of the Final EA.

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Appendix A – Pre-Consultation

Below is a list of organizations, agencies or other affiliations of invitees and/or attendees of the stakeholder scoping meeting held in March 2015 in Hā‘ena on the proposed pedestrian bridge at Hanakāpī‘ai Stream. Please see Appendix D for the report resulting from that meeting.

National Tropical Botanical Garden

University of Hawai‘i at Mānoa

‘Aha Moku

Limahuli Garden

Hanalei Community Association

Hui Maka‘āinana O Makana

Hanalei Watershed Hui

Waipā Foundation

Nā Pali Coast ‘Ohana

Kaua‘i Fire Department

Kaua‘i Ocean Safety

Kaua‘i County, Economic Development

Kaua‘i County, Engineering Division

Kaua‘i Visitor’s Bureau

Division of Conservation and Resources Enforcement

Appendix B – DEA Distribution List

Below is a list of agencies and organizations to whom consultation letters were mailed simultaneously with the publication of the draft EA. There are also a number of individuals from whom consultation was sought. Please see Appendix E for copies of DLNR State Parks' responses to comments received on the DEA.

Federal Agencies
US Army Corps of Engineers
U.S. Fish and Wildlife Service

State Agencies
Department of Health, Environmental Planning Office
    Disability and Communications Access Board
Department of Land and Natural Resources
    OCCL
    Land Division
    DOCARE
    DOFAW
    DAR
    Engineering Division
    SHPD
Office of Planning
Office of Hawaiian Affairs

Hawai'i State Library, Hawai'i Documents Center
Līhue Regional Library
Kaua'i Community College Library

County Agencies
Fire Department
Ocean Safety Bureau
Police Department
Department of Planning
Kauai Civil Defense Agency
Department of Water
Office of Economic Development
Engineering Division, Dept. of Public Works

Organizations
Hui Maka'āinana O Makana
Hanalei Watershed Hui
Nā Pali Coast 'Ohana

National Tropical Botanical Garden
Limahuli Garden and Preserve
ʻAha Moku
Kauaʻi Visitors Bureau
Waipā Foundation
Princeville at Hanalei Community Association

Appendix C – Cultural Analysis

Hanakāpīʻai Valley

Moku of Nāpali
Ahupuaʻa of Hanakāpīʻai
County of Kauaʻi

Cultural Analysis

Prepared for Tetra Tech Inc. by
Keao NeSmith, PhD, and Honua Consulting

Keao NeSmith, PhD
Trisha Kehaulani Watson, JD, PhD
Rosanna Thurman, MA
Bee Thao, BA

September 2016

Table of Contents

1. The authors

Keao NeSmith, PhD (traditionalhawaiian.com), is a consultant, advising commercial enterprises on rebranding and re-imaging and the public sector on culturally- and community-based projects that enhance cultural and community awareness. Keao is a former teacher of Hawaiian and Tahitian languages and Hawaiian studies at the Universities of Hawai‘i at Hilo and Mānoa. Keao has taught at universities in French Polynesia and New Zealand, where he also studied. He is an author and translator of numerous books, including well-known international titles.

Honua Consulting (honuaconsulting.com) has been in operation since 2003 and provides the Hawaiian community with critical opportunities to learn about economic, environmental or community consultation opportunities. Honua Consulting consists of a small group of Hawaiian contractors who work in Hawai‘i to provide professional services in the areas of culture, education, community relations and environmental services.

2. Executive summary

The Kalalau Trail from Kē‘ē Beach at the border of the *moku* of Halele‘a and Nāpali to Hanakāpī‘ai Valley—the most traversed section of the 11-mile trail—has seen a dramatic rise in foot traffic, particularly since the 1980s. Increased incidents of lives being put in danger, near deaths, and deaths on the trail and at Hanakāpī‘ai Stream and Beach have likewise increased in the same time period and this has led to heightened concern among State and Kaua‘i County officials, and the public in general, with regards to public safety.

The State of Hawai‘i Department of Land and Natural Resources (DLNR), State Parks Division, proposes to construct a pedestrian bridge to cross Hanakāpī‘ai Stream. The bridge is proposed to be built 300 feet inland of the mouth of Hanakāpī‘ai Stream to mitigate accidents and deaths due to people attempting to approach or cross the stream during flash flood events. Carpenter (2015) provides an overview of infrastructure needs to facilitate management of the Nāpali Coast State Wilderness Park and the proposed foot bridge likewise facilitates management as one of its functions. Tetra Tech Inc. was enlisted by the DLNR to assess and determine the most plausible location for a pedestrian crossing bridge over Hanakāpī‘ai Stream. The result of this effort was The Bridge Type Selection Report produced by Tetra Tech in which a truss-type bridge is recommended. According to the report (Tetra Tech, 2016), the proposed bridge design,

> . . . reduces the impacts to the existing trail, allows the existing trail to remain open to visitors, avoids rock pavers that are considered arhaeological resources, utilized existing rock outcroppings for foundation supports and ultimately was the shortest clear spanning option. There will be no supporting structures located in the stream.

3. Scope of this report

This report is provided as an addendum to the Environmental Assessment and describes the cultural significance and functions—past and present—of the Kalalau Trail and Hanakāpīʻai Valley and *ahupuaʻa*. This report also recounts some relevant events in history in the *ahupuaʻa*.

4. Hanakāpīʻai: A description

Hanakāpīʻai Valley, in the *moku* of Nāpali on Kauaʻi's north shore, is a funnel-shaped, two-mile deep valley with the wide end on the coast.[1] It is about 1,000 ft. wide at its widest point. The valley is enclosed on its northwestern and southeastern sides with cliff walls about 200 feet high at the coast that ascend in elevation inland, where they meet at the head of the valley to join the Honoonāpali range at an elevation of 1,786 feet.[2] Despite being a deep valley, Hanakāpīʻai has very little flat land as the slopes of its two steep cliff walls terminate abruptly at the stream below.

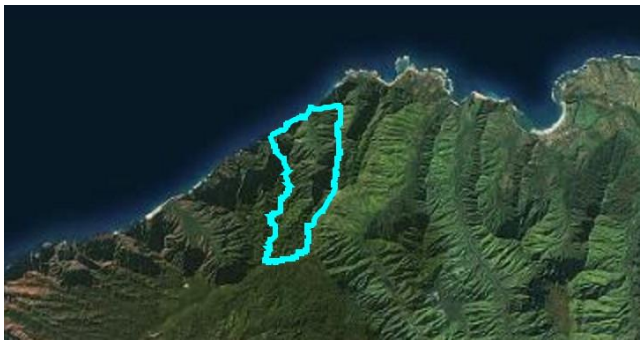


Fig. 1: Hanakāpīʻai Valley highlighted.

The mottled white and black sand on its beach shifts seasonally from plenty in the summer to none in the winter. The calm, summer months see the largest volume of sand at the beach, while most of the sand is washed away in the winter months, when seasonal swells from the north generate enormous, powerful waves and surges that wash away the sand and expose black basalt rocks on the coast.[3]

Fig. 2: Hanakāpīʻai Beach sand and ocean conditions on a typical summer day.

Fig. 3: Sands washed away on a typical winter day with surging sea conditions.

[1] See Tomonari-Tuggle (1989, p. 25) for a detailed description.
[2] Juvik & Juvik (1998, p. 5).
[3] See Daehler (1978).

There is a perennial stream in the valley known as Hanakāpīʻai Stream that is primarily fed by a ledge waterfall known as Hanakāpīʻai Falls at the head of the valley, with periodic heavy rains and runoff augmenting volume in the stream. The winter months generally experience more rainfall than in the summer months. Hanakāpīʻai Falls is about 300 feet high and plummets down the groin at the head of the valley. There is no regular recording of rainfall in Hanakāpīʻai Valley, but the valley receives roughly the same amount of annual average rainfall as Hanalei, for which 77.76 inches average is recorded.[4]

Among the most dangerous situations involving flooding in the Hanakāpīʻai Stream was one incident on February 16, 2016, when more than a dozen hikers were stranded overnight on their return to Kēʻē Beach from Kalalau Valley[5] and another on April 7, 2014, when more than 100 people needed to be rescued by emergency rescue crews.[6]

Fig. 4: Hanakāpīʻai Stream in calm conditions.

Fig. 5: Hanakāpīʻai Stream during a flood event.

Fig. 6: A view of Hanakāpīʻai Valley from the ocean. Steep slopes of the two cliff walls of the valley end abruptly at the stream at the valley floor.

Hanakāpīʻai is also the name of the *ahupuaʻa* (subdistrict) in which the valley is located.[7] Of the six *ahupuaʻa* in the *moku* of Nāpali,[8] Hanakāpīʻai is the first when approaching from the start of

[4] https://rainfall.weatherdb.com/.
[5] http://dlnr.hawaii.gov/docare/news/nr16-034d/.
[6] http://khon2.com/2014/04/07/rescue-underway-for-70-hikers-stranded-at-hanakapiai-trail-on-kauai/.
[7] Traditional Hawaiian *kālaiʻāina* system of land management established by King Manokalanipō in the early 15th century. A *moku* is the largest district of an island, an *ahupuaʻa* is a subsection of a *moku*, and an *ʻili* is a subsection of an *ahupuaʻa*. See Hommon (2013, pp. 12-14); Wichman (1998, pp. 102-103), and Handy & Handy (1991, pp. 46-51).
[8] From east to west: Hanakāpīʻai, Hanakoa, Pōhakuao, Kalalau, Hanapū, ʻAwaʻawapuhi.

the Kalalau Trail at Kēʻē Beach, which is the generally accepted border between the *moku* of Haleleʻa (which includes Hanalei) and Nāpali. As an *ahupuaʻa*, Hanakāpīʻai spans not just the valley in which Hanakāpīʻai Stream is found, but also all of the area from mountain to sea including the length of the Kalalau Trail from Kēʻē Beach to Hanakāpīʻai Beach. On the walk from the start of the Kalalau Trail at Kēʻē Beach, hikers encounter about 14 *ʻōawa* (mini valleys) and about 9 *hulaʻana* (rocky points that can only be passed by swimming around them were it not for the Kalalau Trail) and the trail winds through switchbacks at each of these. There is no doubt that each of these *ʻōawa* and *hulaʻana* have names, but only some of these names have thus far been learned through research of maps and literature. Features such as these are *ʻili* and are significant in describing the *ahupuaʻa* and its various natural resources.

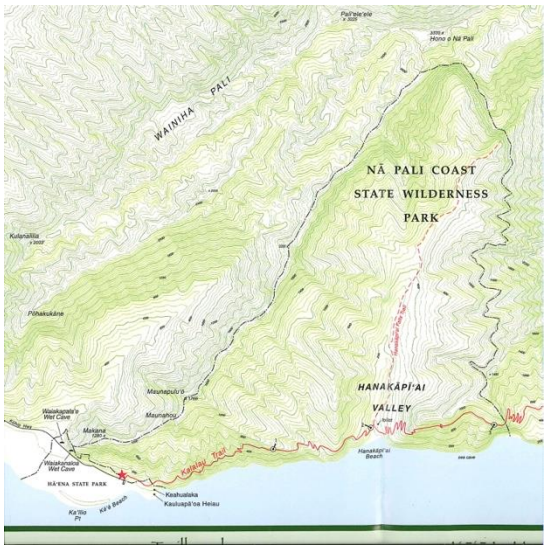


Fig. 7: Contour map showing switchbacks (*ʻōawa* and *hulaʻana*) on the trail between Kēʻē Beach and Hanakāpīʻai Valley.[9]

Fig. 8: A Google Earth image of the start of Kalalau Trail to Hanakāpīʻai Beach.

[9] See brochure: Kalalau Trail: Nāpali coast State Wilderness Park Kauaʻi.

Fig. 9: This map by Gay and Robinson (1891) shows names of some points, valleys, and peaks in the area of Hanakāpīʻai.

Fig. 10: This iconic view of Hanakāpīʻai Beach is seen from Kaleinakauila Point indicated in Gay & Robinson (1891).

Various maps since the early 1800s contradict each other with regards to *moku* and *ahupuaʻa* borders, and this has been true also relative to the border between the *moku* of Haleleʻa and Nāpali. Whereas Harvey (1901) describes the *moku* of Nāpali as inclusive of Kēʻē Beach and terminating at Limahuli Stream (where the National Tropical Botanical Garden is located), most maps pre-dating and post-dating Harvey, such as Coulter (1935, p. 228), use Kēʻē Beach as the border point, with Kēʻē included in the *moku* of Haleleʻa. This is the widely accepted border.

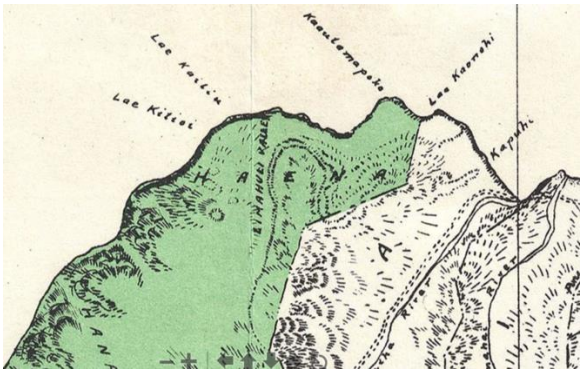


Fig. 11: Harvey (1901) includes Hāʻena in the *ahupuaʻa* of Hanakāpīʻai, *moku* of Nāpali.

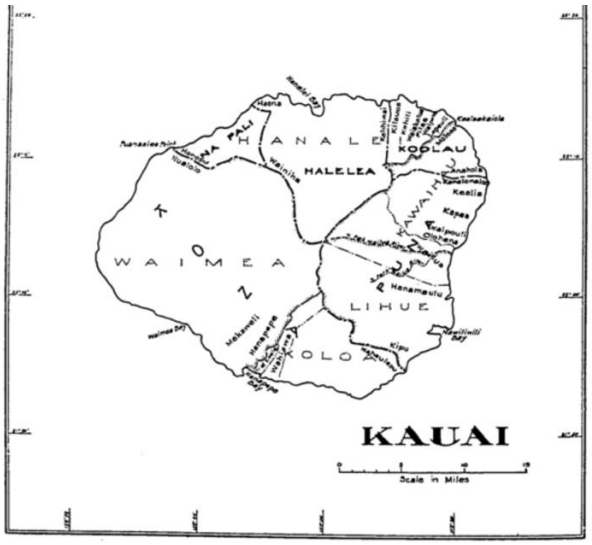


Fig. 12: Coulter (1935) places Hāʻena in the *moku* of Haleleʻa, with Nāpali and Hanakāpīʻai beginning at Kēʻē Beach.

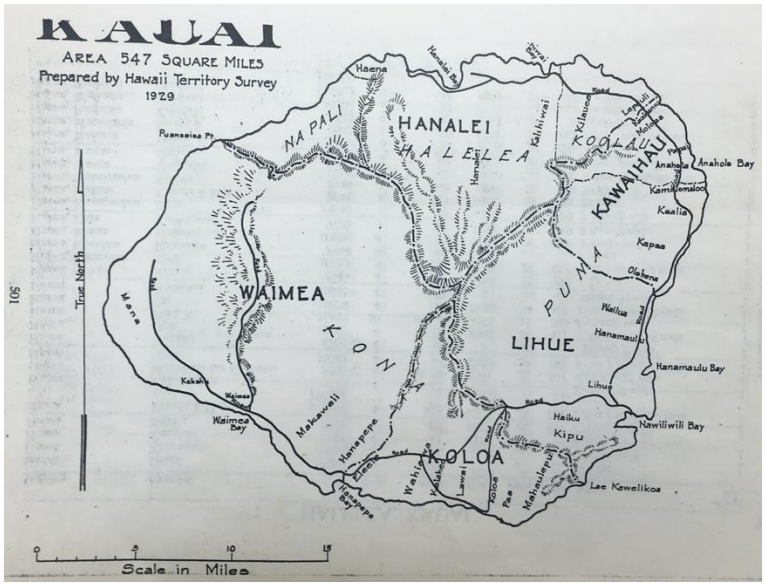


Fig. 13: Moku borders under the Territory of Hawai‘i (1929). Moku names and borders changed.[10]

The boundary certificate of the Hawaiian Kingdom government of 1874 (below) describes the eastern-most border of the *ahupua‘a* of Hanakāpī‘ai as Waikāama Valley just west of Kē‘ē Beach.[11] Wichman (1998, pp. 137-138) also places the border here. According to Wichman (p. 138):

> The first headland between Kē‘ē and Hanakāpī‘ai, at the top of the climb from Kē‘ē on the Wundenberg Trail, is Ka-leina-ka-uila, “jumping off place of lightning.” The cliff that drops from here is Wai-kā-ama, “water striking the canoe outrigger.” It marks the boundary between Hanakāpī‘ai and Hā‘ena. Its name indicates the first of many waterfalls cascading down the cliffs, splashing in the sea.

[10] Territory of Hawai‘i (1929, p. 501).
[11] State of Hawai‘i Department of Land and Natural Resources (1969, pp. 112).

14 Boundary of the Ahupuaa of Hanakapiai

From the foregoing evidence the following decision was rendered

Decision

The Boundary of this land commences on the sea shore at a place called Waikaama and thence to a place called Kokeapoui, thence to a ridge called Laaukea thence up ridge to point or hill to a place called Namanamana. Thence following up same ridge to point or hill called Pookoko, thence up ridge to peak called Puanui Thence up same ridge to peak Kalapaahalulu thence up ridge to Alinui the furthest point of Haena and the junction of this land with Wainiha, thence continuing up along Wainiha to a peak Haka thence up through forest to peak Waiau. Thence to Alakai the highest point on Eastern boundary. Thence round the head of this land to Kapiioa the commencement of Western boundary thence down Western boundary to a cave in cliff called Halehaila thence down to peak Kaooa. Thence continuing down ridge to Peak Pohakuakani. Thence down ridge to Peak Pohakea Thence to peak on ridge Hoolulu. Thence to a rock where the Gods used to meet and called Kailua thence to a trickling stream on the sea shore and called Waipuwahaea and thence round to place of commencement

Duncan McBryde
Commissioner of Boundaries
Island of Kauai

Fig. 14: Boundary Certificate for the Ahupuaʻa of Hanakāpīʻai. Hawaiʻi State Archives.

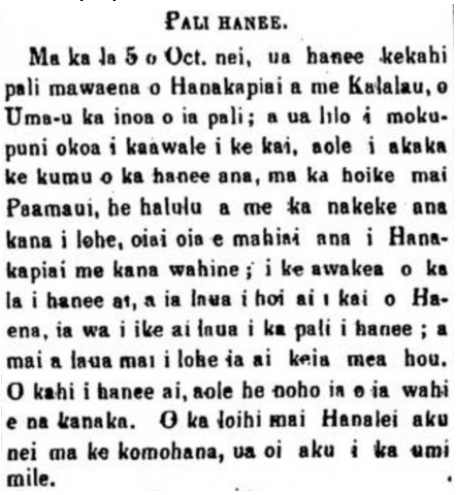
4.1. The Kalalau Trail

The start of the hiking trail is at Kēʻē Beach at the end of the Kūhiō Highway. This trail is approximately 11 miles long and ends up at Kalalau Beach, four *ahupuaʻa* into the *moku* of Nāpali. Wichman (1998, p. 136) reports the following about this trail:[12]

> Precipitous trails, well maintained, climbed in and out of each valley. However, the trail from Hāʻena to Kalalau, which is often said to be an ancient one, was actually created in 1860 under the supervision of Controller of Roads Gottfried Wundenberg. He set off over 400 blasts of dynamite. The trail was created in order to bring out coffee and oranges being grown commercially in the valleys of Kalalau, Hanakoa, and Hanakāpīʻai. For this reason the trail was made wide enough for a heavily laden donkey to walk comfortably.

As a remote place with steep, unmaintained cliffs, the area of Kalalau Trail is susceptible to landslides. As reported in 1871:

Ka Nūpepa Kūʻokoʻa, 21 Oct. 1871, p. 3.



PALI HANEE.

Ma ka la 5 o Oct. nei, ua hanee kekahi pali mawaena o Hanakapiai a me Kalalau, o Uma-u ka inoa o ia pali; a ua lilo i mokupuni okoa i kaawale i ke kai, aole i akaka ke kumu o ka hanee ana, ma ka hoike mai Paamaui, he halulu a me ka nakeke ana kana i lohe, oiai oia e mahiai ana i Hanakapiai me kana wahine; i ke awakea o ka la i hanee ai, a ia laua i hoi ai i kai o Haena, ia wa i ike ai laua i ka pali i hanee; a mai a laua mai i lohe ia ai keia mea hou. O kahi i hanee ai, aole he noho ia e ia wahi e na kanaka. O ka loihi mai Hanalei aku nei ma ke komohana, ua oi aku i ka umi mile.

LANDSLIDE

On the 5th of October, a cliff collapsed between Hanakāpīʻai and Kalalau. The name of the cliff was ʻŪmaʻu. It became a separate rock island in the sea. The reason for the landslide is not known. According to Paʻamaui, there was a loud roar and crackling sound while he was farming in Hanakāpīʻai with his wife in the afternoon of the day of the landslide, and as they were heading back to Hāʻena, that is when they saw the landslide. This news was reported by the two of them. The area where the landslide occurred was not inhabited by anyone. The distance from Hanalei to the west was more than ten miles.

Carpenter and McEldowney (2010) did an exhaustive survey of the Kalalau Trail from Kēʻē to Hanakāpīʻai providing a historical overview, a review of archaeological features, and conditions of the trail at various points.

4.2. Name variants: ʻHanakāpīʻaiʼ and ʻHanakapīʻaiʼ

The name, *Hanakāpīʻai*, has been translated into English by Pukui, Elbert & Mookini (1976, p. 40) as "bay sprinkling food" (*hana kāpī ʻai*); in other words, a bay (*hana*) where food (*ʻai*) is sprinkled (*kāpī*), usually with salt for seasoning or preservation. Wichman (1998, pp. 137-138) also uses this spelling and interpretation of the place name. However, the name can also be interpreted as *Hanakapīʻai*, 'bay of the *pīʻai* berry' (*hana ka pīʻai*) or 'bay of one who is stingy with food' (*hana ka pī ʻai*). Given that a number of interpretations are possible for the meaning

[12] See also Carpenter & McEldowney (2010, p. 86).

of this place name, more context is needed to make a determination as to which interpretation is most reliable. If a story were to be found that provides an explicit interpretation, this would help establish a more definitive meaning. So far, no story that explicit has been uncovered. It is also possible, however, that the multiplicity of interpretations was intentional on the part of the name giver or the people of the *ahupua‘a* or *moku* from generations ago, especially given that each of the interpretations presented here are equally plausible.

Rice (1923, pp. 42-44) explains that the valley was named after a Menehune chiefess named Hanakāpīʻai who died giving birth on the ridge above the head of Hanakāpīʻai Valley. The Menehune were traveling in a large group on the ridge above at the time, and so the company paused to mourn the death of the chiefess. Rice states that this event correlated with the exodus of the Menehune people from Kauaʻi, a single event known in Kauaʻi lore. When this event occurred is unclear. So if the time period of the departure of the Menehune can be determined, the naming of this valley can also be dated.

Many of the *heiau* on Kauaʻi are attributed to the Menehune, including the *aliʻi heiau* of Poliʻahu and Malaehaʻakoa in Wailua, and so their exodus must have coincided with the reign of one of Kauaʻi's *mōʻī* (kings) some time before the last reigning *mōʻī*, Kaumualiʻi. If this can be done, the question remains, "What was the valley called before then?"

Wichman (1998, p.138) offers another interpretation of the place name:

> A play on words transposes the name into Hana-ka-pīʻei, "constant looking out to protect a love affair." A certain chiefess named Hanakoa liked to "make trouble" with a handsome chief named Wai-ʻehu. They met in a cave, thinking themselves secure from prying eyes, but brought attention to themselves by constantly peeking out to see if they were observed.

'Hana-' as a prefix in a place name is understood to mean 'bay' and perhaps 'bay and valley inland of the bay'. Other Polynesian variants of 'Hana-' seen in place names of South Pacific islands are *Ana-* (e.g. Anapoto, Rimatara), *ʻAnga-* (e.g. 'Angaroa, Cook Islands), *Faʻa-* (e.g. Faʻaʻā, Tahiti), *Faka-* (e.g. Fakaofo, Tokelau), *Haʻa-* (e.g. Haʻamene, Tahaʻa), *Hana-* (e.g. Hanavave, Marquesas), *Hanga-* (e.g. Hangaroa, Rapa Nui), and *Whanga-* (e.g. Whangarei, New Zealand), each having the same meaning as 'Hana-'.

Kauaʻi is unique in the Hawaiian Islands in that its bay names are 'Hana-' (e.g. Hanapēpē, Hanakāʻape, Hanalei), whereas the other islands have 'Hono-' place names, as in Honolulu (Oʻahu), Honolua (Molokaʻi), Honomanu (Maui), Honokōhau (Kona, Hawaiʻi), and Honoliʻi (Hilo, Hawaiʻi).[13] It is likely that 'Hono-' is a relatively recent and uniquely Hawaiian innovation of the

[13] Hanakoa (the usual pronunciation among Kauaʻi locals) is sometimes rendered in 19th century Hawaiian language newspapers as Honokoa. Honopū (the usual pronunciation among Kauaʻi locals), the valley to the west of Kalalau in Nāpali, is also recorded in some accounts as Hanapū. It is likely that people started referring to Hanakoa as Honokoa and Hanapū as Honopū in the 1800s with the influence of the variety of Hawaiian of other islands on Kauaʻi people in the time period.

traditional Polynesian ‘Hana-’. This possibly also indicates that the language of Kaua‘i’s people maintained some of its proto-Polynesian roots over time while those of the other islands of the archipelago altered the language.

There is an old Kaua‘i story of a man of Hanamā‘ulu on Kaua‘i’s east coast who was stingy (*pī*) with his food (*‘ai*) when passers-by would pass near his home. It is traditional Hawaiian custom to call out to passers-by, “Hui! Hele mai ‘ai!” (Come eat!) to welcome strangers, especially long-distance travelers, into one’s home and feed them and provide drink. But this man would shy away from such niceties or he would offer poi that was so watered down that it was nearly liquid. He would add small pieces of tough, dried squid to the poi so that his unwanted guest would chew constantly until they became tired and fell asleep and his food would be spared for himself. This is a story that is passed on by elders and is often cited as the source of the expression, “Kaua‘i pī” (stingy Kaua‘i people). This story is sometimes misidentified as a Hanakāpī‘ai story due to the words, *pī* and *‘ai* being used to recount the story in Hawaiian (*Hana- ka pī ‘ai* : Bay of the stinginess with food), but according to elders, this story originates in Hanamā‘ulu and not Hanakāpī‘ai.

4.3. *Wahi pana* and traditional stories of Hanakāpī‘ai

Although Pukui & Elbert (1986, p. 313) describe a *pana* as a “celebrated, noted, or legendary place”, a clearer understanding of a *wahi pana*—as known among native speakers of Hawaiian—is a particular object, such as the remnants of an old, stone house foundation, a rock or rock outcropping, a pool, spring, hill, cliff, tree or grove, surfbreak, reef, fishing spot, or some other identified object or geographical feature that has a story attached to it. Usually, a *wahi pana* has a name, but sometimes while the story remains, the name is lost to time.

The *ahupua‘a* of Hanakāpī‘ai has a number of *wahi pana* in it, and some stories have survived until today and are noted here:

From the unpublished manuscript compiled by Kaua‘i native, J. A. Akina in 1868, the following stories and *wahi pana* in Hanakāpī‘ai are found:

pp. 137-138.

Maio ame Akiua

Aia no mauka loa aku o ke awawa o Hanakapiai, he ahua pohaku na na keikikane Menehune ame na kaikamahine Menehune i hana a kukulu ai, i mea hoike no ka hoomaamaa a hahai ana o ua poe keiki Menehune nei i na hana a lakou i ike ai i ka hana ia e ko lakou mau makua Menehune, o ka like ole wale no nae ma keia hana a na keiki, oia no ka huipu ana o na keikikane ame na kaikamahine Menehune a hana pu me ka lokahi o ka manao, aia wale no ka lakou nana

Māio and ‘Akiua

Far inland in the valley of Hanakāpī‘ai is a heap of stones that Menehune boys and Menehune girls built and set up in order to show off and practice the skills of Menehune children as they followed in the ways of their Menehune parents. The only thing, however, that was different about what these Menehune children would do is that Menehune boys and girls would gather together and work with one thought and purpose in mind, which was to build a rock

o ka paa a ku o ke ahua pohaku i oleloia ma ka lakou hana a hooikaika ana. I ka paa ana o ua ahua pohaku nei ua kapa aku la no ua poe keiki Menehune nei i ka inoa o ua ahua pohaku nei o “Ma-i-o”. He pohaku nui no kekahi a ua poe keiki Menehune nei i hana a lawe a hooku pu maluna o ke ahua pohaku a lakou i hana ai, a o ka inoa o keia pohaku nui a ua poe keiki Menehune nei i kapa ai, oia no o “A-ki-ua”. O ka inoa keia o ke keikikane Menehune nana i alakai a kuhikuhi i ke ano o ka lawelawe ame ka hana ana a paa ai ua ahu pohaku nei a ua poe keiki Menehune nei i hana ai, a o keia keiki ke keikikane a ke kaukaualii Kahuna Kalai Pohaku a Kalai Laau o na ano mea apau o ke alii “Maoli-ku-lai-a-kea”, a he keiki Menehune piha makaukau no keia i kekahi mau hana akamai e hoahele ana no hoi ma ka meheu o kona makuakane. A he mea hoike aku keia pohaku nui a ua poe keiki Menehune nei, i ko lakou mau makua Menehune no ko lakou hana ana i keia hana aiwaiwa a ua lilo no ia mau hana a ua poe keiki nei i mea hoohauoli nui loa aku i na makua o lakou.

heap until it was sturdy and stood upright by their hard work. When the heap was put together, the Menehune children called the heap of rocks Māio. One of the rocks that the Menehune children made and took and erected on the heap was large, and the name the Menehune children gave the large rock was ‘Akiua. This was the name of Menehune boy who led and directed the carrying out of the way the work was to be done as the Menehue children built and erected the stone altar, and this Menehune boy was the son of the lesser chief Stone Carving and Wood Carving Master Kahuna of all things for the king, Maoli-kū-laʻi-ākea, and this was a Menehune who was gifted at these kinds of clever acts that followed in the footsteps of his father. This large stone was set up to demonstrate the skill of the Menehune children to their Menehune parents in accomplishing this kind of amazing feat, and this type of action of these children became something that their parents really enjoyed.

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Ke Kuapa o Hanakapiai me Pohakuao

He ku-a-pa pohaku kekahi mea nui hoomanaoia a keia poe keiki Menehune i hana a kukulu ai, ma kahi ano kahakai o Hanakapiai ame Pohakuao, a aia no ke ike ia nei he hapa wale no paha o keia mau ku-a-pa i keia manawa, mamuli o ka wawahi liilii mau ia ana e na manawa kaikoo ikaika o na wa i hala loa aku nei, a me na kanaka Hawaii no paha i noho ai ma keia mau awawa, a ke waiho mokaki ala no nae na pohaku o ua mau ku-a-pa nei a na keiki Menehune i hana ai, a he kakaikahi wale paha ka poe i ike a lohe paha he mau pohaku ia mai na ku-a-pa mai a na poe keiki Menehune i hana ai ma ia mau wahi. He mau ku-a-pa nunui manoanoa, a

The Reef Fish Pond Wall of Hanakāpīʻai and Pōhakuao

There is a fish pond rock wall built out on the reef that was set up as a memorial that these Menehune children made and built on a kind of beach of Hanakāpīʻai and Pōhakuao, and only a portion of the wall is seen today due to it being dashed to bits over time by the strong swells in times long past, and by Hawaiians too who lived in these valleys, and the rocks of the wall that the Menehune children made are strewn about and only a few remain who have seen or heard about these rocks that used to be part of the fish pond wall that the Menehune children built in those places. The fish pond walls built by these Menehune children were quite huge

kiekie kupono no keia i hanaia ai e ua poe keiki Menehune nei, a no ka nui a lehulehu no hoi ua lilo i mea ole wale no ka hana nui i hana ia ai e lakou, e lawe ana no hoi i ka (moto) mea i maa i ko lakou mau makua i ka hanaia (He po hookahi no a ao pau ka hana nui i ka hana ia) pela no i mau ai ke o mau ia ana o keia mau olelo ae la i keia lahui Menehune a hiki i ko lakou nee hele ana no ka aina o Kapaia-haa (Nu Kilani), ame ko lakou hoi hou ana mai i Hawaii nei ma o ke kii ana a "Pi" he kanaka hapa Menehune a hapa Hawaii, moopuna ponoi a ke kamaaliiwahine Menehune "Eke-ke", kaikamahine ponoi a ke alii Menehune "Ma-oli-ku-lai-a-kea" me "Puhene" kana aliiwahine, ke kamaaliiwahine hoi i hoao ia ai me ke kaukaualii Menehune Kahuna Nui "Ku-maka-hia-a" o ke akua "Kiai Ola" o ua lahui Menehune nei.

and thick, and they were quite tall, and since they did so much of these kinds of things it became of no consequence that so much was done by them. They took the motto that their parents were used to (Only one night and in the morning the work is done that is undertaken) seriously and this is how these words were perpetuated among the Menehune people until they moved away to Kapaiahaʻa (New Zealand) and their return again to Hawaiʻi when Pī went and got them, a part Menehune and part Hawaiian man, a direct grandson of the Menehune princess, ʻEkekē, the actual daughter of the Menehune king, Maolikūlaʻiākea, and Pūhene, his queen, the princess who was betrothed to the lesser Menehune Kahuna Nui, Kūmakahiaʻā, of the god, Kiaʻi Ola of this Menehune people.

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Ka Waa Pohaku o Hanakapiai

Ua kalai waa pohaku no hoi na keikikane Menehune, he kalai wale iho no paha ka ua poe keikikane Menehune nei ma ke ano he hana paani a le'ale'a wale iho no ia a lakou e hana ana. Aka, nae i ka ike ana o na makuakane Menehue akamai i ke kalai waa pohaku o ua poe keiki Menehune nei, i keia hana a na keiki a lakou a no ke ano hoohemahema a haalele wale no hoi o na poe keikikane Menehune i ka hana ana i ka hana a lakou i hana ai, no ia mea, ua lawe ae la ua poe makuakane Menehune akamai nei o ua poe keiki Menehune nei, i ka hana kalai a hoopau pono ana aku i na wahi hemahema i koe o ka waa pohaku a na keiki Menehune i hana ai. I ka pau pono ana o na hana i hanaia ai no ua waa pohaku nei a na keikikane Menehune i hana ai, ua hapai ia aku ua wahi waa pohaku nei a waihoia maluna o kahi moo pali mawaena o na awawa o Pohakuao ame Hanakapiai, a ma kahi hoi i kapeke ai ka wawae o Pohakuao a haule ai aia i ka pali a

The Stone Canoe of Hanakāpīʻai

Menehune boys also carved stone canoes, and Menehune boys would do this kind of carving as a pasttime game and they would have lots of fun doing so. But when skilled Menehune fathers saw the Menehune boys doing stone canoe carving, they would note how inexperienced and terrible they were at it, so the Menehune boys abandoned doing this, so the skilled Menehune fathers of these Menehune boys took it upon themselves to finish up the remaining parts of the stone canoe that the Menehune boys did so badly. When all was done having to do with the carving of this stone canoe that the Menehune boys built, the canoe was carried and left on top of a cliff ridge between the valleys of Pōhakuao and Hanakāpīʻai, and where Pōhakuao's foot twisted causing him to fall off of the cliff where he died and turned to stone, as was recounted earlier, the stone canoe was left on top of this mountain ridge. The Menehune fathers all

makepa'u ai, e like me ia i oleloia mamua loa ae nei, a waiho ua wahi waa pohaku nei maluna o ua wahi moo pali nei. Ua hoi nui maila na makuakane Menehune ame na keiki a lakou a hoike aku la i ke alii "Ma-oli-ku-lai-a-kea" no keia mea he waa pohaku a na keikikane Menehune i hana ai, ame ka hapai ana aku o lakou i ua waa pohaku nei a waiho ma kahi i olelo mua ia ae la, ua apono loa maila ke alii "Ma-oli-ku-lai-a-kea" i keia mau hana apau i hanaia e na keikikane Menehune a kona mau makaainana.

came back along with their sons and reported to the king, Maolikūlaʻiākea about this incident, the stone canoe that the Menehune boys built, and also reported about how the stone canoe was carried by them and placed where it was said earlier, and Maolikūlaʻiākea approved all that was done by the Menehune sons of his subjects.

A he manawa loihi mai nei mahope mai, mamuli paha o ka holo mau ia ana e ka wai a ka ua o na kuaua nui ko'iko'i i haule ma ua wahi moopali la, ame ka po'a ia ana o ka lepo malalo ae o kahi i waihoia ai ua wahi waa pohaku nei, no ia mea paha i olokaa ai ua waa pohaku nei a haule ma kahi ano awawa ma ka huli Haena o kahi moo pali i oleloia mawaena o Pohakuao ame Hanakapiai. A ma ia haule ana paha o ua waa pohaku nei ma kahi i oleloia ae la, ua haki ua waa pohaku nei a na keikikane Menehune i hana ai i na apana ekolu a eha paha, a aia no paha malaila kahi i waiho ai o ua mau apana pohaku nei o ua wahi waa pohaku la.

A very long time afterwards, due to the constant flow of the water and rain of the torrential rainfalls that fell upon these mountain ridges, and due to the dirt under this stone canoe being dug up, this is likely the reason this stone canoe rolled over and fell into a kind of valley on the Hāʻena side of the ridge that was said to be Pōhakuao and Hanakāpīʻai. It was probably when the stone canoe fell where it was stated earlier, the stone canoe that the Menehune boys built broke into three or four pieces, and there they remain where those stone pieces of the stone canoe landed.

Each of the objects identified in the three accounts given by Akina above, a) the rocks, Māio and ʻAkiua, b) the fish pond wall, and c) the stone canoe, is a *wahi pana* as each is a feature or object with a story. The places that are referred to where these incidents occurred are also *wahi pana*. In the case of the stone canoe, according to the story, the fragments of the canoe fell on the Hanakāpīʻai side of the ridge, and so these rock fragments would likely be seen as rock outcroppings or large rocks on the western slope of Hanakāpīʻai Valley.

The following is an account reported in the Hawaiian language newspaper, Ka Nūpepa Kūʻokoʻa, Oct. 22, 1892 (p. 4):

Elua haneri i-a mai a Waikapalae aku a hiki i Kilioe. He heiau nui keia kahi a ka poe hula e kananae hope loa ai mahope o ka uniki ana. O Hiiakaikapoli ka inoa o keia heiau. I keia

Two hundred yards from Waikapalae up until Kilioe is a large *heiau* where hula dancers worship in the final stages of their graduation ceremony. Hiʻiakaikapoli is the name of this *heiau*. In this place is where Hiʻiaka played

wahi i hookani ai o Hiiaka i ka pahu Ka-eke-ee a lohe o Pele i Hawaii.

the drum known as *kāʻekeʻeke* and Pele heard it in Hawaiʻi.

Pii aku he mau wahi alu uuku a hoea i kahi o Kanaloa ma laua me Kamapuaa i hookuku kiekie ai. O Kanaloa ka i pii mua a pina-wele-wele i ka lewa, a ia manawa o Kamapuaa i pii ai a nana iho maluna o Kanaloa. Lilo ka eo ia Kama, a iho aku la ke poo a loaa ka ulumaia i kela awawa o Kokuapuu; maanei iki mai o Hanakapiai. Ilaila oia i ai maia ai, a ua kaleo oia e pau ka hua ana o ia maia. O ka pau ia o ka hua ana o ka maia a hiki i keia la. He mau tausani o na kumu maia.

You climb a few shallow valleys and you reach where Kanaloa and Kamapuaʻa competed in reaching the highest height. Kanaloa was first to climb and he reached way up. At that moment, Kamapuaʻa climbed up and looked down on Kanaloa. So, Kamapuaʻa won, at which time he descended and found a grove of bananas in the valley of Kōkuapuʻu on this side of Hanakāpīʻai. That is where he ate bananas and proclaimed that these bananas would never bear fruit again. This is how the bananas in this area do not bear fruit any more. There were thousands of banana trees.

The valley of Kōkuapuʻu and the banana grove there are therefore also *wahi pana* as a result of this story.

Hoʻolulu is an *ʻili* in the *ahupuaʻa* of Hanakāpīʻai to the west of Hanakāpīʻai Valley consisting a shallow valley high above ocean level, a steep coastal cliff and a round bay on the coast with sheer cliff walls, 200–300 ft. high. The name means ‘to shelter’, ‘to make peaceful’, or ‘to gather’. This cove is well known to boaters as an ideal hideout when the Lawakua wind blows down the coast from east to west, and as long as there are no northerly swells as seen in the winter, one experiences glassy conditions in the cove if the ocean is blown over with whitecaps outside the cove. It makes sense that this cove would be used as a gathering spot for two or more vessels to gather in safety, especially if the Lawakua wind is particularly strong. With the current pulling east to west on the coast, any person or kayak taken on the current would likely end up in this sheltered cove. The function of this cove is referred to in *mele* in the following exerpt from the Hawaiian newspaper, Ka Hōkū o ka Pākīpika (Nov. 14, 1861):

Kai-uli o Hoolulu,	*The sea is dark at Hoʻolulu*
E lai ai na waa,	*Where canoes enjoy tranquility*
Lula mai na pea,	*The sails are calm*

Fig. 15: (view from west to east) Hoʻolulu Cove in the foreground with Hanakāpīʻai Beach in the background and Kēʻē at the far end.

Fig. 16: (view from east to west) Hoʻolulu Cove in the foreground. The mouth of Hanakāpīʻai Stream is just off frame to the left.

Waiahuakua is a valley between Hoʻolulu and Hanakoa and is the western edge of the *ahupuaʻa* of Hanakāpīʻai. Waiahuakua has a cliff face with a dramatic and majestic waterfall, 3,733 feet high, which plummets down two ledges above the ridge and into a hole over a horseshoe cave with two entrances. The waterall is best appreciated by boat or helicopter, but the cave can only be experienced by sea. Boaters refer to Waiahuakua Cave as Two-Door Cave, and small boats, such as zodiacs and kayaks, can pass through from the western opening of the cave and come out the eastern end, where the hole in the ceiling is and where Waiahuakua Falls ends falling into the ocean in the cave. Particular stories or names of this amazing feature have not yet been found, but the name, Waiahuakua (*wai ahu akua* : water of the altar of the gods) suggests a watery altar (*ahu*) to the gods (*akua*). One can infer from this that the top of the waterfall could be considered a type of *ahu* to the gods (likely Kāne, god of fresh water and rain clouds) as often the tops of these cliffs are covered in clouds.

Fig. 17: View of Waiahuakua Falls. The horseshoe sea cave with two openings is beneath this waterfall.

Fig. 18: View from inside Waiahuakua Cave looking out passing from the western opening and exiting at the eastern opening. Waiahuakua Falls terminates through the opening in the ceiling.

Fig. 19: Waiahuakua, the western border of the *ahupua'a* of Hanakāpī'ai. Tomonari-Tuggle (1989, p. 29).

4.4. Wind names, rain names, and local icons

In Hawaiian tradition, local winds and rains are given names. The names are poetic and often descriptive of the nature of the wind or rain identified. Often, the names are specific to a wind or rain that moves in a particular direction and of a particular force, whether strong or gentle, etc. Therefore, a particular area could have multiple wind and rain names, each identifying a type of wind or rain relative to its force and direction. The names are not always a description of the wind or rain. Sometimes they are a reflection of sentiment, perhaps in memorial of an event or person, and therefore the name may not have anything to do with the characteristics of the wind or rain.

The wind of Hanakāpī'ai is known in *mele* (songs, chants) as the *Peke* wind. This is an interesting name as it has multiple meanings. A *peke* is a type of *'o'opu* (freshwater goby) fish. Perhaps this is because of this type of fish being found commonly in Hanakāpī'ai Stream in the past or perhaps across Nāpali, but known as a favorite of the people of Hanakāpī'ai. The rationale is not known today. Another meaning of *peke* is a dwarf—a person of short stature—but a euphamism for the *peke* fish is the *maka poko* (short-faced) fish. Therefore, *peke* and *maka poko* fish are the same.

Perhaps this name is a reference to Menehune since Nāpali is well known to have been inhabited by Menehune. In fact, as noted above, the place name, Hanakāpī'ai, is likely named after a Menehune princess. Menehune are reported to be short in stature, as described by Akina (1868)[14] and therefore this could be the link to the wind name, *Peke*. This could also make sense when considering the euphemism, *maka poko*, a term that could be descriptive of the appearance of Menehune. It is not known whether the *Peke* is the wind of only Hanakāpī'ai

[14] p. 4: "Ka hoopulapula ana o ka lahui Menehune ma na kaiaulu no ia o ka aina o Ka-ma-wae-lua-lani (Kauai) nei, a he lahui kanaka liilii keia o ke kino, me he la he 2 kapuai 6 iniha ko lakou kiekie a i ole, 3 kapuai paha." [The settlements of the Menehune people are here in communities of the land of Kamawaelualani (Kaua'i), a race of people small in stature, perhaps 2 feet 6 inches in height or perhaps 3 feet.]

Valley or the whole *ahupuaʻa*. Nor is the force or direction of this wind described in literature thus far. Therefore, this name is used as a general name for the wind of the whole *ahupuaʻa*.

The *ʻoʻopu* known as *peke* or *maka poko* became known as a symbol or icon of Hanakāpīʻai in *mele*, and using this fish as a term that implies the people of Hanakāpīʻai is a common literary device. Therefore, the people of Hanakāpīʻai can be referred to in a poetic sense as *peke* or *maka poko*. Again, as *ʻoʻopu* is a known favorite food of Menehune people, a connection between the place name, the wind name, and the moniker for the fish and people of the area point to a likely connection between these names and epithets and Menehune.[15]

The following are sayings or epithets that describe the wind, *ʻoʻopu* fish, or people of Hanakāpīʻai derived from 19th century Hawaiian language newspapers and other literature:

Ka ʻoʻopu maka poko o Hanakāpīʻai.	*The short-faced ʻoʻopu of Hanakāpīʻai.*[16]
Nā ʻoʻopu maka peke o Hanakāpīʻai.	*The stunted-faced ʻoʻopu of Hanakāpīʻai.*[17]
Ola i ka ʻoʻopu peke o Hanakāpīʻai.	*Living off of the peke ʻoʻopu of Hanakāpīʻai.*[18]
He Peke ka makani o Hanakāpīʻai.	*The wind of Hanakāpīʻai is the Peke.*[19]
Ka iki koaiʻe a Hanakāpīʻai.	*The little koaiʻe tree of Hanakāpīʻai.*[20]

The 18th century *mōʻī* of Oʻahu, Kūaliʻi, despite having been born in Kailua, Oʻahu, is of the Kauaʻi lineage of Manokalanipō, *mōʻī* of the Kauaʻi Kingdom in the 15th century. The Oʻahu and Kauaʻi Kingdoms were at times one political unit and at other times only loosely associated. One birth chant offered for Kūaliʻi references the strength of the political unity between the two kingdoms. Kūaliʻi is said to have ruled over at least part of Kauaʻi from Oʻahu. Hanakāpīʻai is used as an epithet referencing the people of Kauaʻi and consuming the *ʻoʻopu maka poko* is a figurative way of describing dominion over the land and people, as shown in the following excerpt of the chant:

Ka Nūpepa Kūʻokoa, 11 April, 1868, p. 1.

Mano hele lalo o Kauai—e,	Shark headed down to Kauaʻi
O la-lo o Kauai ko aina—	Down to Kauaʻi, your land
Ke holo nei o Ku i Kauai—e	Kū is traveling to Kauaʻi

[15] According to Wichman (1998, p. 139), the neighboring *ahupuaʻa* to the west, Hanakoa, is also named after a Menehune princess. Wichman reports a number of stories of Menehune in the *moku* of Nāpali.
[16] Ka Nūpepa Kūʻokoʻa, 24 November 1866, p. 4; Ka Naʻi Aupuni, 26 June 1906, p. 1.
[17] An interchanging of *poko* and *peke*; Ke Aloha ʻĀina, 27 July 1912, p. 2.
[18] Ka Nūpepa Kūʻokoʻa, 26 February 1909, p. 5.
[19] Ka Naʻi Aupuni, 25 June 1906, p. 3.
[20] Pukui (1983, p. 152): "A boast of that locality on Kauaʻi. Once may be small in stature but he is as tough and sturdy as the *koaiʻe* tree."

Ke holo nei o Ku i Kauai,	Kū is traveling to Kauaʻi
E ai i ka oopu maka poko	To eat the *ʻoʻopu maka poko*
O Hanakapaiai—e,	Of Hanakāpīʻai
Ke hoi nei o Ku i Oahu,	Kū is returning to Oʻahu
E ike i ka oopu kuia,	To see the *ʻoʻopu kuʻia*

In this excerpt, the shark (*manō*) referred to is likely a play on Mano (as in Manokalanipō, 15th century Kauaʻi king and ancestor of Kūaliʻi), and the returning to Kauaʻi is likely a reference to Kūaliʻi's Oʻahu origin but having dominion over Kauaʻi as well. In this case, the *ʻoʻopu maka poko* and Hanakāpīʻai are epithets for the people of the Kauaʻi Kingdom. A poetic link is made in the pairing of the *ʻoʻopu maka poko*—typical of Hanakāpīʻai—and the *ʻoʻopu kuʻia*—an epithet typical of Kailua, Oʻahu. This clarifies Kūaliʻi's reign over both Oʻahu and Kauaʻi.

The wind that blows down the coast of Nāpali roughly from Kēʻē to Miloliʻi is known in lore and *mele* as the Lawakua wind. While almost each valley and ridge might have their own local winds, the Lawakua is described in literature as the strong wind that blows down the coast on the sea. The logic of this wind name is evident in the various interpretations possible as the meaning. Pukui (1986) describes *lawakua* in the following:

> **lawa.kua. 1.** vs. Strong-backed, muscular, of strong physique, bulging with muscles. See ex., *konapiliahi*. **2.** vt. To bind or tie fast, as on the back. *Fig.*, to be a dear friend or companion. (PH 218.) *Ua lawakua i kō aloha* (dirge), bound to your love. **3.** *(Cap.)* n. Name of a mountain wind at Nā-pali, Kauaʻi. See ex., *noiele*. **4.** *(Cap.)* n. A *lua* fighting stroke.

The wind pushes a canoe paddler down the coast from east to west from the back, so Lawakua seems a most appropriate wind name. While Pukui describes the Lawakua wind of Nāpali as a "mountain wind" (3rd definition), this wind is mentioned in literature in relation to various valleys and ridges along the coast of Nāpali, and so this wind can be understood to be more general and blowing down the coast from east to west. The following are examples of the Lawakua wind being used as a general wind name along the coast of Nāpali:

He lawakua ko na pali	*Nāpali has the Lawakua wind.*[21]
Kuu hoa o ka makani lawakua o Kalalau,	*My dear friend of the Lawakua wind of Kalalau*
a me ka lauae o Makana	*and the lauaʻe of Makana Peak*[22]

5. Residents of Nāpali and Hanakāpīʻai

As reported above in Section 4.1, a man named Paʻamaui and his wife farmed Hanakāpīʻai Valley in 1871 and may have lived there at the time. Daehler (1978) notes "ancient Hawaiian taro terraces" in the valley on the ascent towards the head of the valley. This would indicate

[21] Ka Hae Hawaiʻi, April 17, 1861, p. 12.
[22] Ka Hae Hawaiʻi, Dec. 25, 1861, p. 155.

that in pre-Hawaiian Kingdom times (pre-1840), people lived in and farmed the valley on a regular or permanent basis. The number of *loʻi kalo* (taro patches) would indicate that a sufficiently sizable community lived in the valley to sustainably cultivate *kalo*. This also would accord with the findings of Tomonari-Tuggle (1989, pp. 20, 26) and Yent (1981, pp. 2-6) who produced reports and maps of pre-Hawaiian Kingdom habitation sites. If there were *loʻi kalo* and people, there must have also been other types of crop plants and animal husbandry in the valley to sustain the population. Given the civic duty of *makaʻāinana* (commoners) of the era to pay *ʻauhau* (taxes) annually in the form of a portion of one's harvest or work, there must have been a stable infrastructure in Hanakāpīʻai Valley to support its resident population.

An infamous Hanakāpīʻai resident of the 15th century is an un-named man, but described by Fornander (1918) as a man-eating *ʻōlohe* (martial arts expert) of the valley who travelled to Wailua on Kauaʻi's east shore—the compound of Kauaʻi's highest royalty and families—and challenged Kapakohana, the Kauaʻi Kingdom's strongest warrior at the time, and threatened to eat him and everyone else in the area. After a long, tough battle, and after some of Kapakohana's men were eaten by the *ʻōlohe*, the cannibal was finally defeated and his eyes plucked out and fed to sharks.[23]

5.1. Land Commission Awards and Boundary Certificates

No Land Commission Awards (LCAs) were noted in the Indices of Awards (Territory of Hawaiʻi, 1929), which means that residents of Hanakāpīʻai before the US takeover in 1898 were lessees under the Hawaiian Kingdom government. However, Deverill (see below) is noted as having been "ona" (owner) of Hanakāpīʻai Valley in 1892. This means that Deverill must have been awarded the LCA, which is now lost, or he should have more correctly been referred to as a "mea hoolimalima" (lessee) under the Hawaiian Kingdom government. The same might be said of Kinney (also below) in Hanakoa.

Hanakāpīʻai lessees described in the Nā Pali-Kona Forest Reserve Management Plan (2009, p. 17) are as follows:

Table 1: Lessees of Hanakāpīʻai Valley.

Type	Action/Lease #	Lease Period	Description	Acres	TMK
General Lease	GL 345	25-Jul-1883 to 25-Jul-1913	D.W. Pua et al – transferred to W.E.H. Deverill 11-Dec-1891; Ahupuaʻa of Hanakāpīʻai	Not specified	[4] 5-9-001:001 (portion)
General Lease	GL 1299	27-Nov. 1920-27 Nov. 1935	W.H. Rice Sr; Hanakāpīʻai pasturage	260	[4] 5-9-001:001

[23] Fornander (1918, p. 211, 213).

5.2. Residents: W. E. H. Deverill and K. W. Kinney

The following was reported in the same article referred to above in Ka Nūpepa Kūʻokoʻa, Oct. 22, 1892 (p. 4):

Na Pali—O Hanakapiai, he awawa nui keia nona na eka kupono i ka hanai holoholona, he aneane hookahi tausani paha. Ke noho ona ia nei e Mr. W. E. H. Deverill. Ma keia aoao o ke alapii nui o Hamau, e hoomaopopo e na makamaka ma keia wahi hoomaka aku ka ulu paina o Kapalakiko, wahi a kekahi kaikamahine lalawai o Molokai, oiai oia e hele ana ma keia ala. O ke kumu o ka puka o keia no ka like o ka pali me ka ulu paina. Hoomau aku la oia i ka hele ana a hoea i keia aina o Waiehu, he mau awawa keia elua i hookaawaleia e kekahi wahi ohu kualapa uuku. Noke aku o ke kapae o Leinahoa a ike ia Waila, a he aina no keia i mahuahua iki ae ia Walehu, kupono paha no hookahi haneri poo holoholona.

Nāpali—Hanakāpīʻai is a large valley with enough acerage for animal husbandry, nearly one thousand acres. It is resided by the owner, Mr. W. E. H. Deverill. On this side of the large ladder of Hāmau, if our friends remember that at this place the pine forest of San Fransicso begins, according to a well-to-do girl of Molokaʻi, as she proceeded down this pathway. The reason this was said was due to the resemblance of the cliff to the pine forest. She carried on her way until she reached the land of Waiehu, which are two valleys separated by a roundish and small ridge. As she carried on she reached Leinahoa and saw Waila, which is a land a bit more fruitful in the month of Walehu, perhaps sufficient for a hundred head of animals.

Oiai ka malihini e hele nei, a mamua o ka hoea ana i Honokoa, ua piha mua ka ihu i ka hanu ala o na lau nahelehele like ole. E laa ka palai, awapuhi, mokihana, lauae a me ka hinahina, a o kekahi wahi iloko wale no o ka laau e hele ai a hala he hapalua hora me ka ike ole i ka la a hoea i Honokoa, ke kikowaena o ko Mr. K. W. Kinney wahi. O keia paha kekahi aina nana e hoopahohao i ka noonoo o na makaikai. He nani kona helehelena ma na ano a pau. E laa hoi ke kihapai pua o Elenale. Ma keia aina he ulu na mea a pau a ke ulu mau nei ma ke ano ahiu a hiki wale i ke kudala ia ana i Iulai, 1892, a lilo ia K. W. Kinney. E loaa no keia mau mea ono i ka ai e like me keia malalo iho, alani, lemi, piku, a pela wale aku. Mawaho ae o keia mau mea a pau he maikai ke ea a oluolu pono ka noho ana. Pela kou mea kakau i noonoo ai o Honokoa kekahi o na aina maikai loa o ka Pae Aina, a mawaho ae o Honokoa, pili mai o

While the visitor carried on further and before reaching Honokoa, the nose caught the fresh scent of the different types of foliage, like ferns, wild ginger, mokihana, lauaʻe, and hinahina, and there was a portion of the way that was traveled in the brush and a half hour passed without every seeing thus sun, and then we arrived at Honokoa, the base of Mr. K. W. Kinney's residence. This is perhaps one place that amazes tourists. It is beautiful in appearance in every way. It resembles the flower gardens of England. In this land everything grows and things grew wild until it was auctioned off in July 1892 when it became K. W. Kinney's. Found there are these things we love to eat below, oranges, lemons, figs, and so on. Apart from all this, life is pleasant and good. This was the opinion of your reporter that Honokoa was one of the best lands in the whole archipelago, and after Honokoa was

Kawaipapa, Waikulu, Malaea, Pohakuao a me Makanikahao. He poe aina liilii maikai wale no keia i kupono no ke kanu kekahi wahi a me ka hanai holoholona kekahi wahi. Pii i ke alapii o Kauokoa a huli ma keia aoao nana pono aku ia Kalalau.

Kawaipapa, Waikulu, Malaea, Pōhakuao, and Makanikahao. These are good and small patches of land good for planting and for raising animals in some areas. One climbs the ladder of Kauʻokoʻa and you turn this way to get a good view of Kalalau.

6. The archaeological record

The primary resources cited for archaeological data on Hanakāpīʻai, both the valley and the *ahupuaʻa*, are Tomonari-Tuggle (1989) and Yent (1981). Tomonari-Tuggle describes the following features in the valley of Hanakāpīʻai:

6 or more platforms possibly used as habitation sites; perhaps 2 or 3 of these could have been *heiau*;
13 terrace complexes, each with multiple terraces; most agricultural in nature and some possible shifting function over time from agricultural to habitation;
1 paved area, use uncertain;
1 retaining wall
1 petroglyph
1 coffee plantation site with possible water wheel and chimney still present

Table 2: Summary of archaeological sites in Tomonari-Tuggle (1989 pp. 52-62).

Site Number (HKP)	Site Description	Site Condition
1	**Platform:** located at the mouth of the valley about 30 m W of the stream; 6 m long and 3.5 m wide dirt floor, 50 cm high boulder face on *ma kai* side.	Very poor due to winter surf and camper damage.
2	**Platform:** located at the mouth of the valley about 15 m W of the stream, 102° MN/10 m from the Kalalau-Hanakāpīʻai Loop Trail junction; 5 m x 5 m partially paved dirst platform. Slope behind this structure partially cut away. Likely a recently-built structure.	Fair; partial disrepair
3	**Series of terraces:** located on the W side of the stream at the mouth of the valley; extending from the cliff at the sea inland about 200 m and from 15-22 m high on the bank to about 135 ft above sea level; likely agriclture use.	Very poor; used as campsite
4	**Paved area:** located on top of the cliff at the sea on the W side of the stream; likely a habitation site; 4 m x 2 m boulder paving with retaining wall; dirt area to one side 6 m x 6 m.	Fair; used as campsite
5	**Platform:** located on east bank of the stream at the valley mouth about 40 m below the trail crossing; boulder alignment forming a sand and silt platform floor 4 m x 4 m.	Poor; damage due to winter surf
6	**Retaining walls:** located at the junction of the Hanakāpīʻai Loop Trail and the Falls trail on a steep slope; a series of retaining walls of cobbles and boulders, about 15 m x 20 m; possible habitation site or *heiau*.	Good
7	**Series of terraces:** located on the E bank of the stream; extends 650 m 765 m inland of the valley mouth rising from stream level to about 100 m high; irrigation system (*ʻauwai*).	Excellent; possibly used as a long-term campsite

8	**Series of terraces:** located on W bank of the stream extending 550 m – 700 m inland of the valley mouth and rising from 6 m to 240 ft above sea level terminating at the Loop Trail; *'auwai* system *ma uka* to *ma kai* alignment from the trail to the stream; two levels.	Excellent; partially overgrown
9	**Series of terraces:** located on the W side of the stream; extending from the Loop and Falls trail junction to about 200 m inland; rising from stream level to 320 ft above sea level; more than 20 well-constructed terraces; water source identified as the side stream at the *ma uka* end of the site; 60 m or more long 'auwai from the gully and through the terraces; possible habitation terraces above the 'auwai at the upper end.	Excellent; the Falls Trail cuts through the site
10	**Series of terraces:** located on S side of a branch stream on the W side of the valley and between the Falls Trail and the base of the talus slope about 45 m in distance; likely agricultural site; series of crudely constructed terraces made of cobble and boulder.	Poor
11	**Petroglyph:** located N of site HKP 10 about 30 m above the Falls Trail; resembles a mammalian eye; unique motif relative to known Hawaiian carvings.	Excellent
12	**Series of terraces:** located in a small gulch on the E side of the stream about 1,525 m inland of the valley mouth and 125 m inland of the first stream crossing of the Falls Trail; a series of well-constructed terraces; likely agricultural; the trail cuts across three terrace walls.	Excellent
13	**Series of terraces:** located on the E side of the valley extending from about 1,675 m to 1,830 m inland of the valley mouth near the Forestry ¾ mile stake; terraces built of small rocks and partially eroded; part of the complex likely habitation site.	Good to excellent
14	**Platform and terraces:** located about just under a mile inland of the valley mouth in a gulch on the E side of the stream; possible house site	Fair to good
15	**19th century structures:** located at the *ma uka* end of Site HKP 8 between the Loop Trail and the stream bank; likely remains of a coffee plantation with stone and cement chimney; piece of machinery (possibly a water wheel) present.	Excellent
16	**Series of terraces:** located about 65 m inland from where the Loop Trail crosses the stream on the E side of the valley near a small waterfall.	Fair
17	**Series of terraces:** located from where the Loop Trail crosses the stream to a gully 70 m *ma kai* of that point; about 30 m wide from the stream bank to the talus slope.	Excellent
18	**Platform:** located about 685 m inland of the valley mouth on the E side of the stream near the ½ mile stake adjacent to the Loop Trail; well-constructed dirt platform which may have been used for habitation or as a *heiau*.	Excellent
19	**Series of terraces:** located about 275 m to 565 m inland of the valley mouth extending from the Loop Trail to the base of the steep talus slope about 50 m; a small tributary stream runs near the E side of the site; several of the terraces of this site at the base of the talus slope likely used as habitation sites (uncertain as no midden or artifactual evidence to support this supposition).	Excellent
20	**Series of terraces:** located in a small gully on the E side of the stream about 45 m inland of the first stream crossing on the Falls Trail; terraces on the slope covering about 600 sq m; agricultural site consisting of terraces from the base of the talus slope to the trail.	Poor
21	**Series of terraces:** located on a stream bench on the E side of the valley about 90 m below the first stream crossing of the Falls Trail covering about a 4,400 sq m area; agricultural complex; plastic covered house structure situated on	Excellent except in the immediate

	the site which was still lived in at the time of this survey and the occupant altered the terrace; banana and plumeria trees planted by the occupant near a spring, where the occupant built a stepping stone trail to reach the spring.	area of the structure

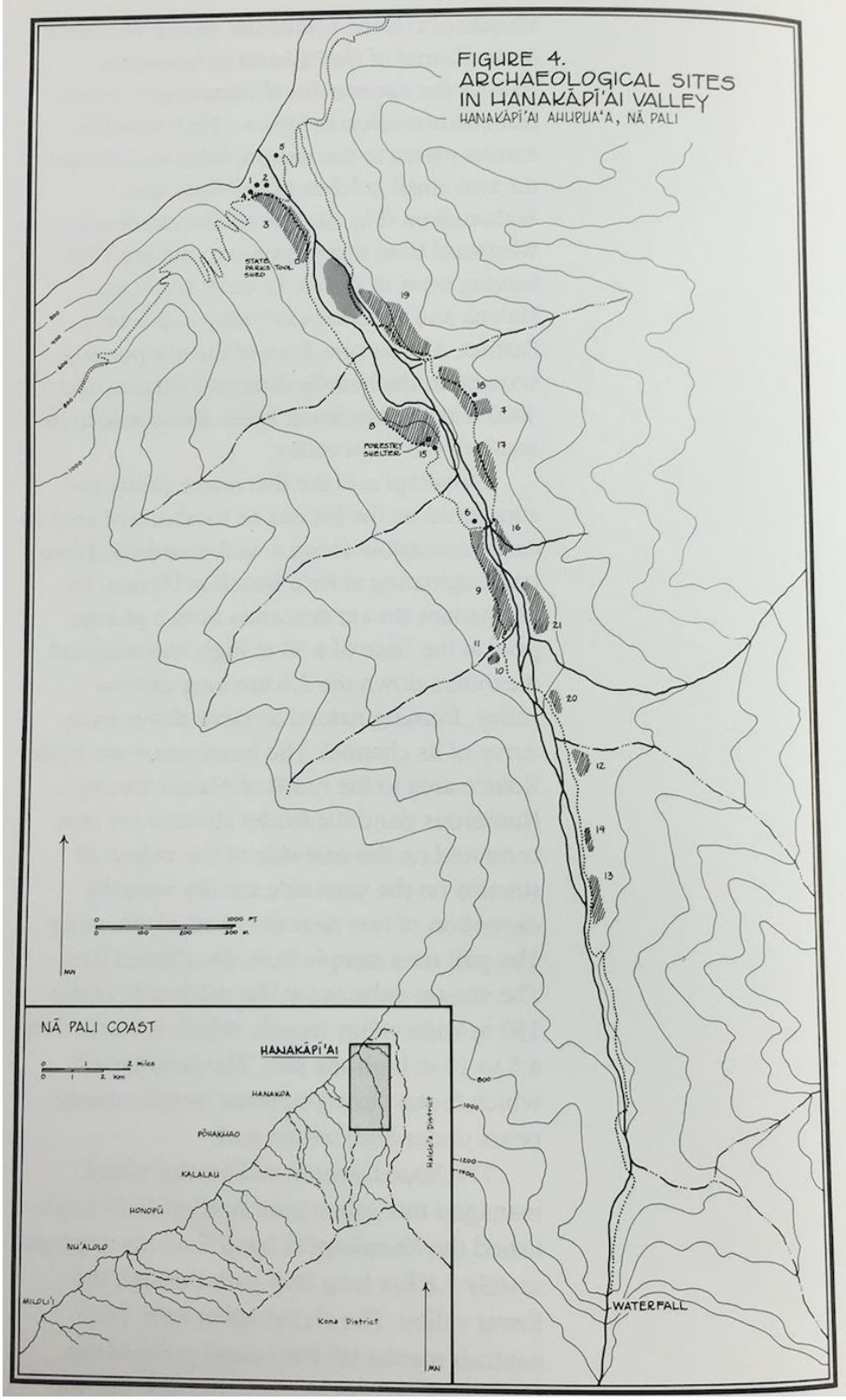


Fig. 20: Map showing archaeological features of Hanakāpīʻai Valley. Numbers correspond to the HKP site numbers of Table 1.
Tomonari-Tuggle (1989), p. 26.

Given the clearly extensive agricultural terraces, farmers of Hanakāpīʻai Valley of the pre-Hawaiian Kingdom era must have had the capacity to feed hundreds of people on a regular basis. These would likely have been people who lived in the entire *ahupuaʻa* and perhaps some of the crops produced could have been exported to other areas of the *moku* or the island, as for *ʻauhau* (taxes), for example. This is evidence of a once robust local economy.

The revelations of the archaeological study help to put a story and a face to people like the Menehune, Paʻamaui, Deverill, and Kinney mentioned above and helps readers contextualize the functions of Hanakāpīʻai and the past. The literature further provides context and the stories of the area with accounts, culture, and dealings among the people who lived in the area in the past. But as much of Nāpali is now a State Park and leases are no longer provided to farm or live in the reserve, the activities of people in the *ahupuaʻa* of Hanakāpīʻai are now only limited to day hikes, fishing, and occasional hunting.

What the archaeology does not show, however, is whether people of the valley or the *ahupuaʻa* were tradesmen, craftsmen (such as wood or stone carvers), feather gatherers or makers of featherwork, fishing gear makers, basket makers or other houseware items, *kāhuna* (priests), or adherents of hula or *lua* (martial arts). While stone artifacts endure over time, any of these other products of craftwork would not likely endure in the tropical climate of the area and therefore, evidence of a trade economy or crafting specialty is lacking.

The number of identified house sites and possible house sites in Hanakāpīʻai Valley perhaps accommodated around 100 people when they were inhabited. It is unclear whether archaeology work in the *ahupuaʻa*, particularly in Hanakāpīʻai Valley, is considered complete by archaeologists and therefore finished, but additional field work and mapping could be warranted, which may produce more data and uncover more manmade features, such as those described above.

7. Territorial Forest Reserve

Although the Reserve was established in 1907, Daehler (1970) reports,

> The highlands of the Na Pali were dedicated to Territorial Forest Reserve protection status in 1907. This protection, however, did not include the lower areas near the Kalalau trail nor the coastal valleys which were at that time being used for agriculture. Taro was still being grown in Hanakapiai.

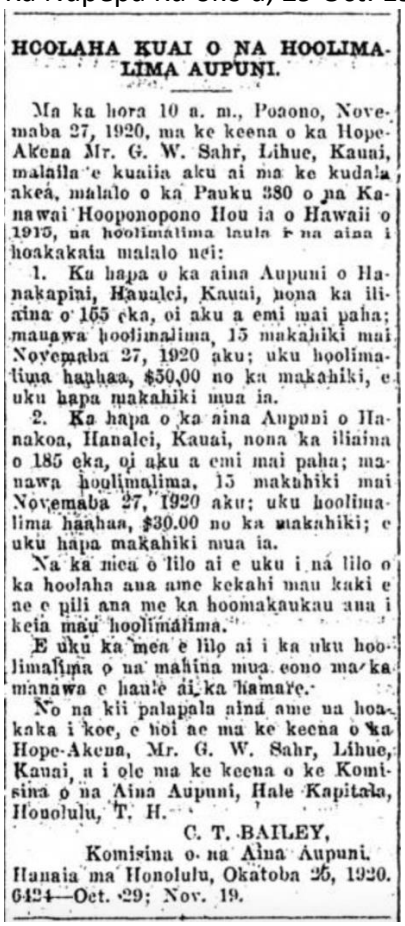
As there were residents living in the valley in the first decade of the 20th century, other types of crops were also known to be thriving at the time, such as coffee, which had ceased by 1920, and oranges.[24] The valley is also known to have been used to raise cattle and horses, even on the ridges along the Kalalau Trail. This also means that people must have been living in the area

[24] Daehler (1970, p. 9).

in the early- to mid-1900s to care for the animals. Daehler (1970) also notes that people were granted leases for these purposes, as listed above.

The following is an announcement regarding leasing land in the area of Hanakāpīʻai in the early 1900s:

Ka Nūpepa Kūʻokoʻa, 29 Oct. 1920, p. 3



HOOLAHA KUAI O NA HOOLIMALIMA AUPUNI.

Ma ka hora 10 a. m., Poaono, Novemaba 27, 1920, ma ke keena o ka Hope-Akena Mr. G. W. Sahr, Lihue, Kauai, malaila e kuaiia aku ai ma ke kudala akea, malalo o ka Pauku 380 o na Kanawai Hooponopono Hou ia o Hawaii o 1915, na hoolimalima laula i na aina i hoakakaia malalo nei:

1. Ka hapa o ka aina Aupuni o Hanakapini, Hanalei, Kauai, nona ka ilaina o 165 eka, oi aku a emi mai paha; manawa hoolimalima, 15 makahiki mai Novemaba 27, 1920 aku; uku hoolimaliua haahaa, $50.00 no ka makahiki, e uku hapa makahiki mua ia.

2. Ka hapa o ka aina Aupuni o Hanakoa, Hanalei, Kauai, nona ka ilaina o 185 eka, oi aku a emi mai paha; manawa hoolimalima, 15 makahiki mai Novemaba 27, 1920 aku; uku hoolimalima haahaa, $30.00 no ka makahiki; e uku hapa makahiki mua ia.

Na ka mea o lilo ai e uku i na lilo o ka hoolaha aua ame kekahi mau kaki e ae e pili ana me ka hoomakaukau ana i keia mau hoolimalima.

E uku ka mea e lilo ai i ka uku hoolimalima o na mahina mua eono ma ka manawa e haule ai ka hamare.

No na kii palapala aina ame na hoakaka i koe, e hoi ae ma ke keena o ka Hope-Akena, Mr. G. W. Sahr, Lihue, Kauai, a i ole ma ke keena o ke Komisina o na Aina Aupuni, Hale Kapitala, Honolulu, T. H.

C. T. BAILEY,
Komisina o na Aina Aupuni.

Hanaia ma Honolulu, Okatoba 25, 1920.
6424—Oct. 29; Nov. 19.

ANNOUNCEMENT OF SALE OF GOVERNMENT LEASES

At 10 a.m., Satudrday, November 27, 1920, at the office of the Assistant Agent, Mr. G. W. Sahr, Līhuʻe, Kauaʻi, a public auction will be held pursuant to Section 380 of the Revised Statutes of Hawaiʻi, 1915, of general leases for the lands stated below:

1. The portion of government land of Hanakāpīʻai, Hanalei, Kauaʻi, whose acerage is 165 acres, more or less; length of lease, 15 years, from November 27, 1920 onwards; lease, $50.00 minimum per year, with a half-year's worth due at the onset.

2. The portion of government land of Hanakoa, Hanalei, Kauaʻi, whose acerage is 185 acres, more or less; length of lease, 15 years, from November 27, 1920 onwards; lease, $30.00 minimum per year, with a half-year's worth due at the onset.

Lesee to cover all expenses for the announcement, with additional charges related to the preparation of these leases.

Lessee to pay the first six months of the lease upon the striking of the gavel.

For maps and further clarifications, report to the office of the Assistant Agent, Mr. G. W. Sahr, Līhuʻe, Kauaʻi, or the office of the Commissioner of Government Lands, Captiol Building, Honolulu, T. H.

C. T. BAILEY
Commissioner of Government Lands

Performed in Honolulu, October 25, 1920.
6424—Oct. 29; Nov. 19.

The lower portions of Hanakāpīʻai Valley and the Kalalau Trail were merged into the Forest Reserve in 1938 after leases came to an end at which time people were moved out of the *moku*. Today, the only legal residents of the *moku* of Nāpali are lessees of cabins on the mountaintop in the area of the Nāpali side of the Kōkeʻe State Park (left side of the highway travelling uphill).

8. Activities in Hanakāpīʻai

Since becoming a forest reserve, the lowlands of Nāpali were occasionally lived in illegally by unpermitted long-term campers, often people wishing to live apart from civilization. Often these people would plant gardens on a small scale to sustain themselves. This continues to be a problem for the DLNR in the *moku* with regards to enforcement.[25] In the late 1960s and into the 1970s, Hanakāpīʻai, as well as Kalalau, became known for its illegal, live-in nudist community and was considered an extension of Taylor Camp, a nudist camp in Limahuli near Kēʻē Beach.[26] But with the shutting down of Taylor Camp in 1977[27] and the sharp rise in the popularity of Nāpali as an adventure tourist destination in the 1980s, the dramatic increase in clothed foot traffic outnumbered the unclothed, and with the proliferation of adventure hiking guides in the 1990s until today, the thousands who make their way to Hanakāpīʻai daily are overwhelmingly typical tourists.

While the overwhelming majority of people visiting Hanakāpīʻai Valley today are tourists, a small percentage of the hiking traffic are Kauaʻi or Hawaiʻi locals who, like tourists, want to visit the famed beautiful valley and experience a completely wild environment, but also to get a firsthand view of the mass of tourists on the trail and in the valley. Since the 1990s, native Hawaiians and other locals have taken a keen interest in traditional Hawaiian cultural practices and many have taken advantage of visits to Nāpali, including Hanakāpīʻai, as opportunities to seek inspiration in developing ideas and plans to become involved in cultural practices today, such as *kalo* or other kinds of farming, *heiau* or old cultural site preservation and restoration, or other aspects of cultural practice. The value of Hanakāpīʻai Valley for Kauaʻi and Hawaiʻi locals has therefore increased in the past couple of decades for its potential source of inspiration.

8.1. Hunting and fishing

Hunting is permissable today at Hanakāpīʻai when the DLNR determines a need for wild pig and/or goat eradication—the only remaining animals in the valley. Bowhunting is allowed year round in the park in addition to the special rifle hunts. As advised in the following announcement on August 14, 2014:[28]

> LIHUʻE — The Department of Land and Natural Resources (DLNR) will conduct a feral goat and feral pig control hunt on Aug. 16 and 17 in the Napali Coast State Park – Hunting Unit G. The animal control is necessary for watershed protection purposes, pursuant to Title 13, Chapter 123 (13-123-9).
>
> The section of the Kalalau trail to Hanakapiai and Hanakapiai Falls will remain open to the public for hiking and will not be not affected by the animal control. However, the remainder of the trail to Hanakoa and Kalalau will be closed to non-control participants.

[25] See, for example, http://www.forkauaionline.com/dlnr-tv-renegades-risks-rewards-napali-coast/.
[26] Wehrheim (2009, p. 66).
[27] Wehrheim (2009, p. 7).
[28] Aug. 14, 2014; http://dlnr.hawaii.gov/huntered/2014/08/14/nr14-097h/.

> The areas open to animal control will be between Hoʻolulu valley (4 miles) to Kalalau valley (11 miles) portions of Hunting Unit G.

As Kauaʻi has quite a sizable local population of hunters and fishermen, the eradication practices of the DLNR have a potential of benefitting locals who hunt for food and sport, and who teach their children these activities. Fishing occurs up and down the Nāpali coast, primarily *ʻopihi* picking on the coasts, spear fishing (reef fish), surround net fishing (akule, for example), and trawling (mahimahi, ʻahi, snapper, for example). It is still considered among local families particularly special to be able to feed one's family with food hunted or fished on the island, and so Nāpali is appreciated for its bounty. As Nāpali is inaccessible except by hiking or boating, the volume of game is greater in the area than in the more populated parts of Kauaʻi.

8.2. Culture, but not Hawaiian culture

Likely since the late 1960s it has become customary for many hikers, usually tourists, to stack rocks in a tower at hiking destinations and other remote locations. In traditional Hawaiian culture, an *ahu pōhaku* (stone altar) would be erected as a drystack four-sided *kuahu* (a synonym for *ahu*) upon which offerings would be left for *ʻaumākua* (guardian spirits/ancestors) or *akua* (gods), such as Kāne, Kanaloa, Lono, Kilioe, or Kiha. If intended as a *kūʻula* (fishing shrine), offerings would be left on such an *ahu* in hopes of or in gratitude for bounteous fishing. Some locals are known to do this occasionally today, but in the case of the ubiquitous vertical rock stacks at hiking destinations and sacred sites across Hawaiʻi, such is not a traditional Hawaiian cultural practice.

This custom is likely originally attributable to the Taylor Camp influence of the late 1960s and early 1970s, when such a thing was done. This act therefore caught on among visitors and recent immigrants to Kauaʻi. Christine Hitt reports in an article (Aug. 9, 2016)[29] that rather than an *ahu* in the traditional Hawaiian sense,

> . . . the rocks at Hanakapiai are not being utilized in this way. Instead, they're being built to memorialize a person's visit. This is not a new trend, nor is it only an issue in Hawaii. In the same way that people have carved their names into the banyan tree in Lahaina on Maui, or have used white coral to write their names by a road and stacked lava rocks at Kilauea volcano on Hawaii Island, it's considered by many to be a form of graffiti.

Such imported notions of rock stacking sometimes offend locals and native Hawaiians in particular for seeming to parody traditional Hawaiian culture rather than respecting ancient traditions with understanding. The rationale for rock stacking is little understood, but while it has a graffiti aspect to it as Hitt explains, it appears that those who do this think of the act as somehow spiritual as well. Whether rock stackers believe that they are honoring *heiau* culture or *ʻai kapu* religious traditions, which pre-date Christianity in Hawaiʻi, or whether they are using *heiau* and rock stacking as a way to somehow channel spiritual thought in a more general

[29] http://www.hawaiimagazine.com/content/why-rock-stacking-hanakapiai-beach-isn%E2%80%99t-considered-pono-right

sense, or whether they consider it an expression of art, is uncertain. This act may even have no particular function other than as a marker that one was there.

Rock stacking becomes particularly disturbing when done on already established sacred sites. Poliʻahu Heiau in Wailua, for example, is one such *heiau* where rock stacking is known to occur. Many *heiau* restoration and repair projects are underway on Kauaʻi, but to do rock stacking at a *heiau* means moving rocks of the *heiau* to stack them. This alters the *heiau* structure and runs counter to *heiau* restoration goals and can cause tension among Kauaʻi locals with respect to those who stack rocks.

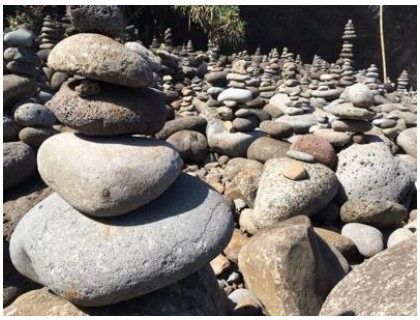


Fig. 21: Rock stacks at Hanakāpīʻai Beach. Stacking is a relatively new phenomenon and not connected with traditional Hawaiian practices.

Fig. 22: Rock stacks at Poliʻahu Heiau in Wailua. Rock stacking on sacred sites is particularly disturbing to native Hawaiians.

9. Conclusion

The DLNR State Parks Division proposes that a pedestrian bridge be built to traverse the Hanakāpīʻai Stream. The impact of such a feature on manmade features in the area dating from antiquity can be determined by an examination of the cultural, historical, and archaeological records as presented above.

As the DLNR does not currently provide leases for anyone to live or farm in the *moku* of Nāpali as the government allowed in 1938 and earlier—apart from cabins on the mountaintop in the area around the Kōkeʻe State Park—cultural practices in the *moku* are limited to hiking, camping with permit, hunting with permit, fishing, and gathering of foliage for cultural practices, such as *lāʻau lapaʻau* (traditional herbal medicines and practices), hula, or for various types of material culture. The non-profit organization, Nāpali Coast ʻOhana (napali.org), has a stewardship agreement to study, maintain, and restore cultural sites in the *moku* and currently focuses its work on the *ahupuaʻa* of Nuʻalolo (both the *ʻili* of Nuʻalolo Kai and Nuʻalolo ʻĀina) and Miloliʻi. Formerly, the ʻOhana also worked to help maintain cultural sites in Kalalau. It is possible the group could consider doing the same at Hanakāpīʻai or perhaps another similar type group could endeavor to maintain and/or restore cultural sites in Hanakāpīʻai. Such opportunities open the door for the full range of cultural practices to be done in the *moku* as is done around Kauaʻi. Such has been the case at sites the ʻOhana has done its work and a great many people from around Kauaʻi and beyond have benefitted from these opportunities.

Given the location of identified features by Tomonari-Tuggle (1989) and the various *wahi pana* described above, and given the topographical and geographical features deemed most appropriate to anchor the two ends of the spanning bridge for stability, the proposed spanning bridge does not appear to infringe or otherwise disturb manmade features in the immediate area of the proposed bridge. Features *ma uka* and *ma kai* of the proposed foundation of the bridge on both the east and west sides of Hanakāpīʻai Stream are located several meters away and therefore should remain intact.

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Photo credits:

Fig. 1: http://kipukadatabase.com/kipuka/Ahupuaa.html?ObjectID=610&b=2

Fig. 2: http://www.perfectdayshawaii.com/assets/HikingHanakapiaiBeach_HanakapiaiBeach-1.jpg

Fig. 3: https://calitrails.files.wordpress.com/2014/01/nptrail4.jpg?w=930&h=619

Fig. 4: http://media-cache-ec0.pinimg.com/originals/e5/39/58/e5395842fb7472d5d9f5bfedae143ea3.jpg

Fig. 5: http://www.staradvertiser.com/wp-content/uploads/2016/03/web1_20160217_hanakapiai_stream_flooded.jpg

Fig. 6: http://hawaiian.com/wp-content/uploads/2015/06/Hanakapiai-Beach-Kauai-Hawaii.jpg

Fig. 8: https://farm6.staticflickr.com/5216/5385854836_c9055e6331_z.jpg

Fig. 10: http://www.aloha-hawaii.com/wp-content/uploads/2011/10/hiking-kalalau.jpg

Fig. 15: http://adventuretravelromance.com/wp-content/uploads/2012/09/Hawaii-NapoliCoast-1024x679.jpg

Fig. 16: http://www.dickschmitt.com/travels/Hawaii/kauai-na-pali/20050812_kauai-helicopter_132.JPG

Fig. 17: http://www.paulrene.com/travel/KT_Waiahuakua_wfall.jpg

Fig. 18: http://worldtoptop.com/wp-content/uploads/2011/09/waiahuakua_cave_falls.jpg
Fig. 21: http://www.hawaiimagazine.com/content/why-rock-stacking-hanakapiai-beach-isn%E2%80%99t-considered-pono-right
Fig. 22: Courtesy of Alan Carpenter.

Appendix D – Community Outreach – Focus Group Scoping Meeting

Hanakāpīʻai Scoping Meeting Report

July 2015

Prepared for Department of Land and Natural Resources (DLNR) by Honua Consulting

HONUA CONSULTING

www.honuaconsulting.com

Table of Contents

Cover Photo Credit: Hawaiʻi State Archives Digital Collections. "Haena Beach. Kauai." Photographic Image. Call number: PP-47-1-011. No date.

Executive Summary

Honua Consulting assisted Tetra Tech and DLNR (Division of State Parks and Engineering Divison) in hosting a small focus group meeting in Kīlauea (Kauaʻi) on April 14, 2015 at the Kīlauea Community Center for the following purposes: 1) providing contemporaneous and accurate information to a select group of community leaders on the on-going situation in Hanakāpīʻai and urgent need for a viable response plan or plans, and 2) solicit information from these same leaders about area and situation that would be helpful in developing immediate, interim and long-term (sustainable) responses.

Approximately 15 community participants (List of attendees provided on page 7) gathered to discuss the ongoing situation at Hanakāpīʻai. The meeting was a focus group discussion aimed to facilitate insights and views from kamaaina and stakeholders from the area.. This meeting was not considered a formal meeting for a "public meeting" or other regulatory compliance purposes. Rather such a meeting was used to enhance information available to the state and its contractor(s) to improve decision-making. It was also to increase communication between the state and community.

The following critical points emerged as priorities for this community:

- There has been a substantial spike in the number of individuals going into Hanakāpīʻai on a daily basis. Meeting participants estimate that between 1,000 – 2,000 individuals use the trail daily.
- The combination of pedestrian traffic and increased storm activity have resulted an increased number of hikers getting stranded on the Kalalau side (west side) of Hanakāpīʻai Stream.
- The County now has to conduct a significant number of air rescues, largely for tourists, out of the area. These rescues for primarily for day use visitors or hikers:
    - Day use visitors do not require a permit (as opposed to campers who do require a permit).
    - Day use visitors often are ill equipped or prepared for the experience (e.g., lack the correct equipment, lack the physical fitness, and/or do not give themselves enough time for the hike thereby endangering themselves and others).
    - This increase in day use visitors and hiker traffic has been exacerbated by guidebooks and electronic applications that irresponsibly promote dangerous activities to large audiences who are unfamiliar with Kauaʻi's natural resources or wilderness areas.

- The Kauai Fire Department (KFD) currently conducts helicopter rescues for hikers stranded at Hanakāpīʻai as a result of stranded hikers attempting to cross the stream during storm and flash flood conditions. Previously, hikers needed to ride-out the storm then proceed back on the trail as weather and stream conditions permitted. This policy changed as hikers decided not to wait for stable conditions or use the emergency calls for convenience. This places KFD staff in dangerous situations in conducting helicopter rescues during storm events.
- KFD considers this situation to be a serious public safety issue in need of immediately public attention and coordinated government response.
- State Parks and KFD have been working on possible rescue strategies. One strategy is to construct a bridge crossing at Hanakāpīʻai Stream to effectively eliminate air rescues of stranded hikers who are able to cross the stream and continue to hike back to the trailhead. The bridge concept is one option for consideration as DLNR and KFD continue to work on this situation. Participants expressed concerns of a bridge option but most supported the concept as a means to ensure the safety of KFD staff rather than accommodating visitors. They also discussed other options such as permits, entry gates, education and interpretation, entrance fees, and rangers. The community strongly supports the County and their Firefighters and wants to see the State fulfill its obligations to manage the Park(s) and its resources better in the future, thereby reducing some of the responsibility currently being left to the County and KFD.
- The participants appreciated the seriousness and urgency of the situation and wanted to see action taken as soon as possible to reduce or entirely eliminate any threat to KFD personnel. Community leaders also see this urgent situation as an opportunity to form new and productive partnerships.

Introduction

Hanakāpīʻai[1] means "bay sprinkling food" and is located along the coast of the island of Kauaʻi in the Hanakāpīʻai ahupuaʻa in the Nāpali district. A popular beach and hike destination, Hanakāpīʻai is one of five beaches within the Nāpali Coast State Park (Clark, 2002), which itself consists of 6,500 acres of protected area managed under the jurisdiction of the State of Hawaiʻi Department of Land and Natural Resources Division of State Parks. The park includes 11 miles of isolated shoreline and five distinct sand beaches: Hanakāpīʻai, Kalakau, Honopū, Nuʻalolo (sometimes also written as Nuʻulolo or Nuʻololo), and Miloliʻi (Clark, 2002; Handy, Handy and Pukui, 1991). It is considered by many to be one of the most beautiful landscapes in the world.

The Hanakāpīʻai Valley is part of the Nāpali Archaeological District and primarily lies within the Nāpali Coast State Wildness Park (Tomonari-Tuggle 1989). The valley consists of alluvial flats with taro patches, house foundations, burial mounds, inland terrace of pāhoehoe materials and historical foundations. The taro paddies are not tiered in steeply rising terraces but are tiered and the vegetation consists of hala, kukui, mango, noni trees, kī, and various ferns (Hawaiʻi Register of Historic Place, 1979; Craig, 1991).

One of the most sought out trails in the Nāpali District is the Hanakāpīʻai Falls Trail. It is important to note that there is only one trail into the Nāpali District, which branches off into three side trails. The trail includes several stream crossings beginning at mid-valley with long stretches of the hike on the east side of Hanakāpīʻai stream. The trail starts at the intersection of the Kalalau Trail and the Hanakāpīʻai stream at Hanakāpīʻai Beach and runs two miles inland along the west bank of Hanakāpīʻai Stream, passing an abandoned coffee mill (HPHP, 1979; Wichman 1989; Bell 1990; Craig, 1991).

Getting to Hanakāpīʻai Beach involves a two-mile hike from Haʻena State Park, where the Kalalau Trail starts. The Kalalau Trail runs from Haʻena State Park in the ahupuaʻa of Haʻena and concludes in Kalalau. After two miles on the Kalalau Trail, hikers can extend their hike by taking the Hanakāpīʻai Falls Trail up-valley for two miles, ending at Hanakāpīʻai Falls. The stream is approximately two miles into the hike.

[1] Historically, native language speakers did not use diacritical markings; as such authors spell Hanakāpīʻai a number of different ways in different texts. It is "Hanakapiʻai" in Handy, Handy and Pukui 1991 and Clark 2002, Many texts do not use diacritical markings. The online version of *Place Names of Hawai'i* by Pukui spells it as "Hanakāpiʻai". The Department of Land and Natural Resources uses the preferred spelling found in the print versions of *Place Names of Hawai'i*, "Hanakāpīʻai".

It is estimated that as many as 2,000 visitors attempt the hike to Hanakāpīʻai daily. Over the last few years, there have been an increasing number of hikers becoming stranded on the west side of the Hanakāpīʻai stream during storm events when the stream becomes impassable. Whereas it was once the policy of the Kauaʻi Fire Department to leave stranded hikers during storm events, in recent years hikers have begun to attempt to cross the flooding stream resulting in numerous deaths. As a result, fire rescue personnel have begun conducting dangerous air rescues during storm events to airlift out hikers. These air rescues are extremely dangerous for both fire personnel and hikers. They are becoming more frequent.

The State of Hawaiʻi Department of Land and Natural Resources along with the County of Kauaʻi are currently working to find a solution to reduce the need for these dangerous air rescues. The purpose for the meeting was to further inform community leaders of the situation and seek input as to a solution.

Hanakāpīʻai Meeting Information

Overview: DLNR and Tetra Tech EM Inc. hosted a small focus group meeting in Kīlauea (Kauaʻi) on April 14, 2015 for the following purposes: 1) providing contemporaneous and accurate information to a select group of community leaders on the on-going situation in Hanakāpīʻai and urgent need for a viable solution to emergency situations, and 2) solicit information from these same leaders about area and situation that would be helpful in developing the project.

Date: Tuesday, April 14, 2015

Time: 5:00 – 7:00 p.m.[2]

Location: Kīlauea Community Center (2460 Keneke St. Kīlauea, Hawaiʻi 96754)

List of Community Member Invitees[3] – See sign in sheet for full list of attendees

Name	Association
Chipper and Hauʻoli Wichman	National Tropical Botanical Garden, Executive Director
Carlos Andrade	Professor (UH Mānoa) & Author (*Haʻena*)
Tommy and Annie Hashimoto	ʻAha Moku Representative, Kauaʻi (Haʻena Resident)
Mehana Vaughn	Professor (UH Mānoa), teaches community program in Haʻena
Kawika Winter	Limahuli Garden, Director
Joel Guy	Hanalei Community Association, President
Presley Wann	Makaʻāinana o Makana, President
Makaala Kaaumoana	Hanalei Watershed Hui, Executive Dir
Stacey Sproat	Waipa Foundation, Executive Director
David Sproat	Former Fire Captain
Samson Mahuka	Former Rescue Worker
Canen Hoʻokano	Delegate for Sabra Kauka
Sabra Kauka	Na Pali Coast ʻOhana, President
Mark Hubbard	
Randy Wichman	

State and County Member Roster (not all listed below may be attending)

Name	Agency	Division / Position
BC Jason Ornellas	Kauaʻi Fire Department	Battalion Chief
Capt. Charlie Metvier	Kauaʻi Fire Department	Captain (Air Rescue)
Capt. Aukai Lee	Kauaʻi Fire Department	Captain (Ground Rescue)
Capt. John Blalock	Kauaʻi Fire Department	Captain
Chief Kalani Vierra	Kauaʻi Ocean Safety	Chief
Chief Francis "Bully" Mission	DOCARE	Kauaʻi Chief
George Costa	Kauaʻi County	Economic Development
Sue Kanoho	KVB	Executive Director
Clyde Tomihara	DLNR	Engineering Division / Project Manager
Valerie Suzuki	DLNR	Engineering Division
Russell Kumabe	DLNR	State Parks, Development Branch Chief
Alan Carpenter	DLNR	State Parks, Archaeologist

[2] Meeting ran until approximately 8:30 p.m.

[3] As a matter of protocol, when an organization is engaged, the head of the organization was invited. The organizational leader was asked to send a delegate instead if he or she was unable to attend.

Victoria Wichman	DLNR	State Parks, Interpretive Program Specialist – Kauaʻi
Dan Quinn	DLNR	State Parks, Administrator
Curt Cottrell		State Parks, Assistant Administrator
Stephen Thompson	DLNR	State Parks, Kauaʻi Parks Section Parks District Superintendent
Mary Jane Naone	DLNR	State Historic Preservation Division, Kauaʻi – Lead Archaeologist
Kawika Smith	DLNR	DOFAW
Galen Kawakami	DLNR	DOFAW
Kevin Kelly	Tetra Tech EM Inc.	Project Manager
Kehau Watson	Honua Consulting	Owner and Senior Research Consultant
Matt Sproat	Honua Consulting	Community Engagement Specialist

Meeting Details

Facilitator(s): Kehau Watson and Matt Sproat

- Opening pule
- Introductions of everyone present at meeting (10 minutes)
- Opening by Kehau Watson thanking everyone for coming and explaining opening remarks (1 minute)
- Brief remarks by DLNR representative explaining concerns about Hanakāpīʻai (15 minutes total)
    - Public safety problem (2 minutes)
    - Brief comments from KFD (3-5 minutes)
    - Comments on engagement with other agencies (1 minute)
    - History of efforts of Parks Division and other related efforts (3 minutes)
    - Potential Solutions, including increased patrols and access restrictions (5-7 minutes)

The remainder of the time was dedicated to listening to input from the select community leaders who were invited to attend and provide in-depth comments on the situation. Specifically, we solicited input on the various options being considered, the cultural resource issues related to those options and other variables that the community may have knowledge of that team working on this project may not have considered. This is a sophisticated and knowledgeable community; this is particularly true of the group of leaders who were invited and attended. Another important element of this meeting was developing and maintaining a healthy relationship with the North Kauaʻi community, which is essential to the success of this project.

Additional Note:

There was a meeting from 1:00 – 2:00 pm on April 14, 2015 prior to the meeting with the Kauaʻi Mayor's Office to brief Mayor Carvalho.

Analysis

The community offered a rich discussion and provided a wide range of potential options for consideration. These recommendations can be broken down into two general categories: mitigation measures and response actions. Mitigation measures are preventative activities that help to prevent or reduce the threat while response actions are activities or actions that respond to a hazard[4] situation. They are categorized accordingly below. Photographs of meeting notes as taken during the meeting are provided as Appendix B.

Further analysis of key recommendations / priorities are provided based on community input.

Community Recommendations

Mitigation Measures	Response Actions
Build Shelter (including restrooms and shelter)	Bridge
Permitting system	Restoration of alternative / original trail
Install gate	Charge for rescue
Improve or increase enforcement	"Fast action" rope bridge / double apron
Volume meter	No action / stop rescuing people
State rangers (preferably two positions)	Developing / enhance private public partnerships
Enhancement of education / interpretation	Rescue zip line
Increase social media awareness	Repeater at Keʻe (signal)
Ranger for Nāpali Coast State Park	Temporary bridge
Permit for hikers	Bridge upstream (secondary route)
Close Hāʻena / close entire area	Emergency SMA / CDUP[5]
Increase funding for DLNR	
Pilot Program: KFD / DOCARE Prevention on trail	

Shelter / Strongbox

The option to build a shelter on the west side of the stream was discussed, as this option would allow stranded hikers to wait out severe weather events. KFD believed that the shelter would reduce the amount of rescue flights needed as personnel could stay with the stranded hikers till the weather subsided to allow for hiking back on the trail. State Parks stated that improvements in this park section include a new shelter as well as increasing the number of composting toilets. In addition, a replacement storage building was being planned. In the

[4] Throughout this report, we have employed standard definition of hazard as provided by FEMA: "Events or physical conditions that have the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, damage to the environment, interruption of business, or other types of harm or loss." Events are not disasters until they impact humans.

[5] SMA Regulations attached as Appendix C.

interim KFD recommended having a strongbox that was vandal proof that would hold supplies and provisions needed for response and rescue activities.

Next steps: The strongbox option is being coordinated between State Parks and KFD.

Permitting or Fee System (Gate)

A fee system has been included in the Hā‘ena State Park Master Plan and is currently in progress by State Parks (Division of State Parks) and its advisory group. The fees are seen as a means to manage the amounts of visitors to both Hā‘ena and Nāpali park areas.

Participants inquired about a hiker's permit (i.e., day use) that could improve the management of hiking activities and volume, and enable State Parks/DLNR staff to inform hikers of the proper shoes, clothes, equipment and water that may be needed for the hike to Hanakāpī‘ai. They believed DLNR staff such as State Park rangers should be present.

The concerns regarding hikers focused on their behavior especially during severe weather events. There was agreement that most of these hikers are not experienced nor conditioned to hike trail areas such as the Kalalau Trail and have limited knowledge of the trail conditions and the amount of time needed for the hike. KFD and DLNR stated that during severe storm events, these hikers disregarded warnings, signage and State Parks' efforts to inform them of hazardous conditions. It was believed that the limited time visitors have on Kauai prompt their decisions to enter hazardous conditions as they have to make their departure flights or scheduled vacation events that day. This has become a serious concern as the trend is towards adventure tourism in seeking the "Hanakāpī‘ai experience".

An entry gate and fee system was discussed as means to manage the volume of visitors to these park areas, improve security for vehicles and private property, and provide a venue for educating hikers and day use visitors.

Participants expressed frustration from the online and printed sources accessed by day use visitors and hikers that do not accurately nor respectfully describe the trail and conditions. Tour guidebooks, computer and phone "apps" were seen as contributing to misguiding hikers and those purveyors should be held responsible in trying the fix the problem.

Partial closure of the Hanakāpīʻai area and entire closure of the park were discussed, as some believed, for a variety of reasons; however, the State should place the needs and resources of this area above the desires of visitors.

Next Steps: These issues have been concerns with State Parks and have been discussed during the development of the Hāʻena State Park Master Plan.

Enforcement (Rangers)

Participants strongly urged for greater enforcement in this area and for more enforcement officers here and on the island. DOCARE (Division of Conservation and Resource Enforcement) staff explained that funding restrictions imposed on the department led to significant reduction in the number of enforcement officers on the island of Kauaʻi. This resulted in reducing the ability to provide more support on the Kalalau Trail as DOCARE's primary responsibility of enforcing DLNR regulations limits the presence of reduced staff. Participants noted that the presence of persons with knowledge of the trail appeared to make an impact in improving hiker safety. They noted that DOCARE enforcement activities should be coordinated with the County lifeguards. Many felt that having a presence on the trail will be effective and discussed various options such as hiring off-duty DOCARE officers or other enforcement staff or non-enforcement staff.

State Parks noted it is currently recruiting to fill a recently vacated ranger position for Hāʻena. Participants expressed that more rangers, at least two, were needed to attend to Hāʻena State Park and the Kalalau Trail. Na Pali Coast ʻOhana, a 501(c) organization, a grass roots non-profit foundation dedicated to the preservation of natural and cultural resources in this park area (ʻOhana), proposed the concept of a non-government ranger or docent, hired by the ʻOhana through private-public partnership options, to provide this function.

Next Steps: The enforcement issue is one to be discussed and coordinated between DLNR divisions and the County. The Hāʻena Master Plan identifies a variety of enforcement issues in the Hāʻena and Nāpali park areas.

Volume Meter / Rain Gauge

Participants suggested the idea of a rain gauge or volume meter to help gather better data from the mauka region to determine when the stream would be become dangerous or impassable. The Kauai Civil Defense Agency is consulting the National Oceanic and Atmospheric Administration and the National Weather Service on monitoring options. Potential issues with this solution would be communication limitations in the stream area (i.e., once the data was obtained, how would you let people already hiking know the river was becoming dangerous or that a flash floor was coming), although it was noted that some of the communication components of the County of Kauaʻi Multi-Hazard Mitigation Plan (http://www.kauai.gov/Portals/0/Civil_Defense/HazardMitigationPlan/KauaiPlan.html) may be able to assist with that. KFD repeatedly noted that often the most dangerous days were the ones that were very clear and sunny in the makai area, because people could not tell that it was storming up mauka.

Next Steps: Kauaʻi Civil Defense Agency personnel will follow up on this option.

Education / Interpretation

The participants urged greater education and interpretation for visitors and hikers, primarily at the site but also across the island. It was noted that the hotels, airports and airlines do not provide any education about the hazards of the area. There were comparisons made to the public safety videos about public beaches that are shown at the airports and rental car pick-up sites; a similar campaign should be considered (for Hanakāpīʻai but perhaps for all of Kauaʻi's wilderness areas).

State Parks staff mentioned that there is now more signage up at the site for hikers to see as they enter the park and begin the hike. It was also noted that through the options being developed in the Hāʻena Master Plan, all visitors to the area can, and possibly will, be required to watch an education training video to educate them about the area when the orientation facility is constructed.

Meeting participants also wanted to see social media and other methods of education and interpretation used to educate those who come to the area. It was recognized that all of these options require funding, and the hope was that entrance fees or permitting fees would go to funding these different activities. It was also noted that entities profiting from the area should be supporting these education programs as well.

Next Steps: Education and interpretation is a plan element in the Hā'ena Master Plan and will continue to be issues for coordination and collaboration between DLNR and the County.

Bridge

There were concerns about installing a bridge. Some felt it would considerably change the character of the area; others felt it would become an attractive nuisance. Liability issues were also raised. Some felt that the "bad behavior" of ignorant tourists should not be accommodated.

State Parks personnel mentioned that there are a variety of considerations including but not limited to ADA (Americans with Disabilities Act) regulations that would need to be reviewed in the development of any structure in the wilderness area.

Despite concerns with the bridge concept, everyone present recognized that KFD personnel are regularly placed in life-threatening situations because of the current problems in Hanakāpī'ai and a bridge is one potential response. A variety of options were offered under this category, including installation of a temporary bridge or installing a bridge upstream (approximately 100 years upstream and using a secondary route). Different types of bridges were discussed: rope bridges, "fast action" bridges, a "double apron" bridge (also known as a floating bridge or pontoon bridge, see below) or a zip line.

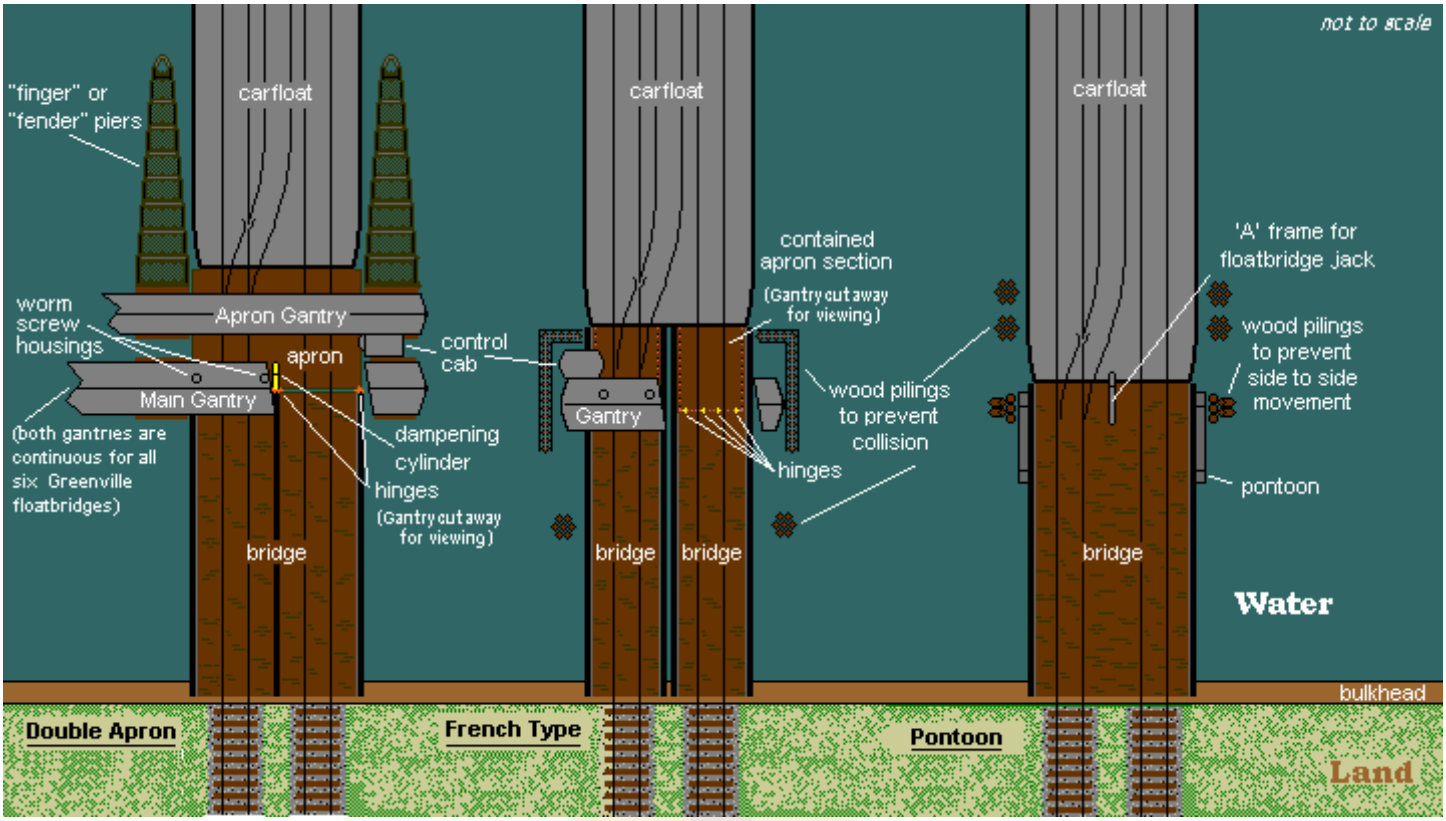

Photo 2. Depiction of different types of bridges, including a "double apron" bridge as mentioned in meeting. Participant recommended that we look up "double apron" bridge. Photo Credit: http://trainweb.org/AbandonedLIRR/bridges.htm

An invitee, who was unable to attend the meeting in person, emailed in a recommendation to consider living bridges, root bridges or living tree bridges. Examples of such bridges can be seen at http://rootbridges.blogspot.com/. (Website provided by invitee.)

A participant, the Executive Director of the National Tropical Botanical Gardens, brought in a sample of a lightweight composite material used in a bridge being built at the gardens and used in the construction of the bridge used in the Ohe'o Gulch area in Maui.[6] The example was considered to be a comparable example to be further explored, because of the similar conservation nature of the area, the remoteness of the Kīpahulu District of East Maui, and cultural history of East Maui, and the similar storm events and deaths that have occurred there.

[6] The 'Ohe'o Gulch example is comparable to Hanakāpi'ai in that there have been numerous visitor drownings at the popular pools. It would be valuable to study how the placement of the bridge has impacted the area. The area is managed by the National Park Service. There has been an interesting history with the local community in the area, who at times have conflicts with the federal government.

While some community members were very hesitant about a bridge, others asked that its design and installation be expedited and asked for additional information about how such a project would be expedited through the SMA (shoreline management area) process, which is a county permitting process, and the CDUP (conservation district use permit) process, which is a state permitting process. KFD also seemed to have a location it felt was ideal for the placement of a bridge that best suited the needs of the situation and environment. The participants appeared willing to defer to the location recommendation should the bridge option be pursued. The KFD representative also noted that he believed the bridge should be eventually removed; it should not be a permanent structure in the valley.

Next Steps: This option will continue to be discussed between DLNR and the County.

Restoration of Old Trail

The idea of restoring the old trail was mentioned, many said that it may be hard to find or lost / overgrown entirely. Community members noted Charlie Cobb-Adams knows where the old trail is and/or that it can still be found.[7] It is an option to be further explored and considered. The old trail could also possibly be found with LiDAR or other modern technology that could penetrate the forest canopy.

Historical accounts further support the position that old trails provide an alternative. In Handy, Handy and Pukui (1991), they write of the many historic overland trails that traversed through the valleys of the Napali coast: "There were also trails. The Napali cliff trail, which was built in the late 19th century, runs from Haʻena to Hanakapīʻai, Hanakoa, and Kalalau. More anciently the old Hawaiians used a number of overland trails. The Kamaile trail descended into Nuʻulolo Valley inland. There was a trail connecting Nuʻulolo with Honopu. A good trail overland connects Kalalau with Haʻena."

This potential for this option would largely depend on the viability of the trail and its restoration. Further, it would also depend on convincing visitors who may be primarily interested in the coastal area to instead take the mauka trail. Participants in the meeting noted that seeking lifeguard input would be valuable in pursuing this alternative.

[7] At least two media accounts in the local newspaper cover this option. These articles are included as Appendix D.

Next Steps: This option will continue to be discussed between DLNR and the County.

Air and Ground Rescues

Currently, the County has the legislative authority to charge people for rescue events and does not use it. Some participants believe that they should begin to do so. The costs to the County are extremely expensive, and the County needs to begin to look at a way to begin to offset the expense. Rescue efforts also take first-responders away from other needs in the community in other parts of the island, potentially jeopardizing other Kauaʻi communities and/or residents.

Previously, KFD only conducted ground rescues to those stranded at Hanakāpīʻai, where staff was sent to escort hikers out after the weather and stream conditions subsided. Due to a large number of hikers that attempted to cross the stream during storm and flood conditions and consequent injuries and fatalities, KFD decided to implement air service to transport staff to aid stranded hikers and air lift those in need. The situation has developed where more hikers do not want to wait for conditions to subside or panic during these events.

Currently, the County has the legislative authority to charge those that request air rescue services, but have declined to use that authority to date.[8] These air and ground rescue services are expensive and impose a financial burden on the County. Many participants believed that these services should be charged to the rescued to defray costs to KFD. Also, many were concerned that these rescue activities take the first responders away from the response needs of others in the community. KFD preferred to air lift the injured hikers and escort others out when conditions have subsided.

Next Steps: These options are being discussed within the County.

[8] It should be noted that since this meeting was held, an ordinance addressing this issue has been introduced at the County Council. An article on this topic is included in the appendices.

Discussion

Participants noted that there will be no "silver bullet" to the situation at Hanakāpīʻai. They believed DLNR and the County will need to work with the community for support and involvement for any effective solution. The meeting provided a variety of insights and levels of support for solutions to address the safety issues at Hanakāpīʻai.

There was overwhelming support for KFD and its efforts and the safety of their staff. Participants discussed the bridge option as a permanent or interim option and the potential regulatory requirements including the County's SMA permit process. A timeline of actions and activities was discussed and developed.

Activity	Type of Activity (Response or Mitigation)	Responsible Party or Agency	Next Step
Strongbox	Response	Funding from DLNR, Operation by KFD	Follow up ASAP
State Parks Ranger Position	Mitigation	State Parks (Stephen Thompson)	Recruitment Closed (in process of hiring)
Community Engagement Pilot Program with Nāpali Coast ʻOhana	Mitigation	DLNR with Nāpali Coast ʻOhana	Pursue for implementation Summer 2015
Gate / Access Fee	Mitigation	DLNR State Parks with Hāʻena Community	Based on Hāʻena Master Plan and DLNR Rules
Education and Interpretation	Mitigation	DLNR and Community Partners	Ongoing
Bridge	Response	DLNR (State Parks and Engineering Division)	Based on whether or not this option is pursued and which SMA process pursued (emergency or non-emergency)
Reopening old trail	Mitigation and Response	DLNR (State Parks and Engineering Division)	Based on finding trail and time it would take to restore, potential follow up with C. Cobb-Adams
Additional Enforcement (i.e., DOCARE)	Mitigation	DLNR (State Parks and DOCARE)	Based on funding (i.e., restoration of TAT, transient accommodation tax, funding from legislature)

State Parks reiterated that it will continue to work with the County on these issues as well as discussions with community members. Participants expressed interest to be involved in the development of options and solutions of the safety issues at Hanakāpīʻai, and encouraged DLNR to involve the community in this project.

Conclusion and Recommendations for Next Steps

Thanks to high turn out and hearty dialogue, the community meeting in Kīlauea produced a great deal of helpful information about how move forward in responding to stranded hikers in Hanakāpīʻai and reducing the risk to KFD personnel. The immediate next steps with the community for DLNR and Tetra Tech should be as follows:

- State Parks follow-up with KFD on the strong box.
- Work with the County on action options as identified by the Participants and clarify County regulatory requirements for the bridge option and the County's rescue policies.
- Follow up with Nāpali Coast ʻOhana representatives regarding pilot program, and also possibly other community members who expressed interest in supporting pilot program
- State Parks to initiate a management strategy for Nāpali including coordination with the on-going Hāʻena Master Plan.
- DLNR will continue to work on the improvements proposed at the meeting including the bridge option, shelter and alternative trail routes.
- State Parks will continue its efforts to work with the community as demonstrated in the Hāʻena Master Plan project and other projects using community input. State Parks staff has worked extensively on establishing trust with community members in the Hāʻena community.

Whatever option the State, in close coordination with the County, chooses to pursue, it will be important to continue to keep lines of communication open with the community and build upon the goodwill developed at this first meeting.

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Appendix E – Responses to Comments Received on the DEA

OFFICE OF ENVIRONMENTAL QUALITY CONTROL

DAVID Y. IGE
GOVERNOR

SCOTT GLENN
DIRECTOR

DEPARTMENT OF HEALTH | 235 South Beretania Street, Suite 702, Honolulu, HI 96813 | oeqchawaii@doh.hawaii.gov (808) 586-4185

November 23, 2016

Lauren Tanaka
Division of State Parks
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street, Room 310
Honolulu, HI 96813

Dear Ms. Tanaka,

Subject: Draft Environmental Assessment (EA) for the Hanakāpī'ai Stream Bridge Project, Nāpali Coast Wilderness State Park, Kaua'i

The Office of Environmental Quality Control (OEQC) has reviewed the Draft EA prepared for the subject project and offers the following comments for your consideration:

1. We would like to point out that, while a correct Agency Publication Form was submitted for the project, the Project Summary Information page in the Draft EA incorrectly lists your agency both as an Applicant and as the Accepting Agency. The Department of Land and Natural Resources should be identified instead as the "Proposing and Determining Agency."

2. Similarly, the same page of the Draft EA notes the Environmental Assessment Trigger is Use of State Conservation District Lands and Special Management Area; this is further repeated in Section 1.4 on Page 12. Please correct this to reflect that the actual Chapter 343 Hawai'i Revised Statutes (HRS) triggers are the Use of State lands and State funds, as well as the Use of Conservation District land; "Special Management Area" is not a trigger of Chapter 343, HRS.

3. Another technical correction to be made relates to the verbiage in the first paragraph on Page 13, which states, "State Parks will consider all comments submitted during the HEPA process. Once the HEPA process is complete, the Land Board will be asked to issue a FONSI and approval to proceed with the proposed actions as permitted." In fact, the Land Board's issuance of a FONSI (Finding of No Significant Impact) – or an Environmental Impact Statement Preparation Notice, for that matter – is an integral part of the environmental review ("HEPA") process, as is our subsequent publication of the Land Board's determination. Approval to proceed with the proposed action could occur once the environmental review process has been completed.

4. The treatment of "Determination" on Page 26 is another important element of the environmental review process that requires supplementary attention. Declaring that a FONSI has been determined is premature in a Draft EA; additionally, the relevant agency to make determinations for this project would be the Department of Land and Natural Resources as the "Determining Agency," not State Parks as the accepting agency. Further, while an assertion is made that the (errant) determination is based on an analysis under the criteria of Section 11-200-12, HAR, a detailed discussion should be included in the Final EA addressing each of the 13 Significance Criteria identified in the referenced section.

5. On a technical level, we appreciate seeing an acknowledgement of climate change; however, we note the discussion only addresses how a potential 3-foot rise in sea level by the year 2100 would not affect this project, due to its location approximately 44 feet above mean sea level. We believe it is well understood that more intense precipitation events will occur locally as a result of the changing climate; these events will quite likely exacerbate the flash flooding hazards that are driving this project.

   The discussion of Hydrology in Section 3.3 of the Draft EA states that the average slope of the main stream channel throughout the watershed is 0.18%, which we assume meant to say 18%. The hydrological study apparently modeled 100-year flooding to produce a result showing the stream depth in the proposed bridge location would increase as much as 29 feet. Without any statement or discussion, the narrative assumes that the bridge would be located some unstated amount above this potential flood height. We believe the discussion would have greater value if an assurance was made that the hydrologic modeling factored in greater flood events that are much more likely in the future, rather than only relying on historical statistics of flood potential.

   Besides a rendered photograph of the proposed bridge structure and alignment (Figure 1), the Draft EA only contains one other graphic, a schematic diagram of the bridge crossing indicating the Water Surface Elevation (WSE) of Hanakāpīʻai Stream at the proposed bridge location is 41.16 feet (above mean sea level?). The drawing also shows the WSE of the stream with Bulk Flow (presumably meaning, at flood condition) is only a few feet higher, at 44.63 feet. This seems to contradict the statement in the Hydrology section that at flood stage, the stream could be as much as 29 feet higher. The schematic further confuses the situation by indicating the bottom of the bridge is at 45.16 feet, suggesting the bridge would be built less than one foot above the estimated Bulk Flow elevation. Finally, the diagram depicts the existing stream bottom at the location of the proposed bridge at about 30 feet (AMSL?), which means the stream is over 10 feet deep, even though logic and Figure 1 suggests the stream is fordable by foot at this location. Please be sure the Final EA not only clarifies the elevation and heights of these important project elements, but also includes sufficient maps and graphics to enable a reader to obtain a clear picture of how the project fits into the environmental setting.

Thank you for the opportunity to comment on the Draft EA. We look forward to a response that will also be included in the Final EA. If you have any questions, please contact our office at (808) 586-4185.

Sincerely,

Scott J. Glenn

Scott Glenn, Director

cc: Alison Andrews (Tetra Tech, Inc)

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
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Ref. No. P-15359

October 31, 2016

MEMORANDUM

TO: Mr. Curt A. Cottrell, Administrator
Division of State Parks
Department of Land and Natural Resources

Attention: Ms. Lauren Tanaka

FROM: Leo R. Asuncion, Director

SUBJECT: Draft Environmental Assessment for the Hanakāpīʻai Stream Bridge Project in the Nāpali Coast State Wilderness Park, Kauaʻi, Hawaiʻi; TMK: (4) 5-9-001: 001

Thank you for the opportunity to provide comments on the subject Draft Environmental Assessment (Draft EA), received October 12, 2016.

According to the Draft EA, the Department of Land and Natural Resources (DLNR) proposes to install a 4-foot wide, 82-foot long aluminum truss pedestrian bridge across Hanakāpīʻai Stream, and construct approximately 50 feet of new trail to connect the bridge to the existing Kalalau Trail in the Nāpali Coast State Wilderness Park, Kauaʻi. The proposed project area is approximately 300 feet inland from Hanakāpīʻai Beach, and is located within the Special Management Area (SMA) designated by the County of Kauaʻi.

The estimated project cost is $506,000, and the proposed construction is expected to take 10 weeks to complete.

The Office of Planning (OP) has reviewed the Draft EA, and has the following comments to offer.

1. The subject project is proposed by the DLNR, and is an agency action pursuant to Hawaii Administrative Rules Chapter 11-200. The terms "Applicant" and "Accepting Agency" under Project Information Summary of the Draft EA, page iv, should be changed to "Proposing Agency" and "Determining Agency" respectively.

2. The Final EA should provide a confirmation from the U.S. Army Corps of Engineers, Regulatory Branch, Honolulu District, as to whether an Army Corps of Engineers Permit is required for the proposed bridge project. If an Army Corps of Engineers

Permit is required, a federal consistency review will be required from the OP, Hawaii Coastal Zone Management (CZM) Program.

3. Please note that the planning department of the various counties is charged with assessing SMA permit applications. Pursuant to Hawaii Revised Statutes (HRS) § 205A-28, no development as defined in HRS § 205A-22, shall be allowed in any county within the SMA without obtaining an SMA permit.

If you have any questions about this comment letter, please contact Shichao Li of our CZM Program at (808) 587-2841.

c: ✓Alison Andrews of Tetra Tech, Inc.

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
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Ref. No. P-15359

October 31, 2016

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Division of State Parks
Department of Land and Natural Resources

Attention: Ms. Lauren Tanaka

FROM: Leo R. Asuncion, Director

SUBJECT: Draft Environmental Assessment for the Hanakāpīʻai Stream Bridge Project in the Nāpali Coast State Wilderness Park, Kauaʻi, Hawaiʻi; TMK: (4) 5-9-001: 001

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If you have any questions about this comment letter, please contact Shichao Li of our CZM Program at (808) 587-2841.

c: ✓Alison Andrews of Tetra Tech, Inc.

PHONE (808) 594-1888 FAX (808) 594-1938

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAI'I 96817

HRD16-8013

December 6, 2016

Lauren Tanaka
Department of Land and Natural Resources
Division of State Parks
1151 Punchbowl Street, Room 310
Honolulu, HI 96813

Re: Environmental Assessment
Hanakāpī'ai Stream Bridge Project
Nāpali Ahupua'a, Hanakāpī'ai Moku, Kaua'i Mokupuni
Tax Map Key: (4) 5-9-001:001

Aloha e Lauren Tanaka:

The Office of Hawaiian Affairs (OHA) is in receipt of your October 7, 2016 letter, for the draft environmental assessment (DEA) for a project, Hanakāpī'ai stream Bridge Project (stream). The plan is to install a 4-foot wide, 82-foot long aluminum truss pedestrian bridge (bridge) over the stream and construct about 50 feet of new trail to connect the bridge to the existing Kalalau trail. State Parks has identified a need to reduce the risk posed by flash flooding of Hanakāpī'ai stream to hikers on the Kalalau trail and to the County and State personnel who respond to hikers needing emergency assistance. The purpose of the project is to reduce this risk and the need for emergency missions to rescue stranded hikers.

According to the DEA, the proposed bridge across the stream provides a practical response to the need to address the risks to both hikers and responders. The bridge intends to fill this need with minimal impacts on the cultural and natural environment in the Nāpali coast State Wilderness Park and is not expected to increase the current usage and visitation of the park. OHA has concerns with the ease in access to the Kalalau trail, it could also increase the volume of vehicle traffic and hikers which would impact the trail and bring greater impact to the Hā'ena State Park, the main entrance to the Kalalau trail.

OHA understands the need to keep hikers safe from the flash flooding of the stream, and at the same time the rescuers safe from providing risky emergency missions. OHA also supports the safety, preservation and protection of Hā'ena, a historic and cultural wahi pana. One of OHA's strategic priorities focuses on protecting and preserving cultural and historic sites. We have a statutory mandate to make sure our Native Hawaiian historic and cultural resources, flora and fauna, water and traditional landscape, are all protected.

Providing an improved and safer passage for hikers may have the untoward effect of increasing pedestrian traffic as those who would not want to risk being stranded at the river during rain events may now decide that it is safer to traverse.

As a member of the Hā'ena State Park Community Advisory Committee (CAC) for the Hā'ena State Park Master Plan, OHA is working close with the Hā'ena community members, cultural practitioners, County, and State departments to ensure this wahi pana's natural and cultural resources are protected and sustained for future generations.

The CAC's plan is for every visitor that enters Hā'ena State Park, to receive visitor education and sensitivity awareness for this special historic place. OHA would like to encourage the Department of Land and Natural Resources, Division of State Parks, to provide a more proactive approach to the hiking and camping permitting process to include information and video regarding the rich history and cultural significance of the Hā'ena Archaeological Complex. The Hā'ena Archaeological Complex was deemed significant because it represents a large, nearly continuous, and mostly intact complex of archaeological features dating from the early prehistoric period to the recent historic period.[1]

In 1978, Dr. Hallet Hammett and his colleagues, at the Archaeological Research Center Hawai'i, Inc., performed a series of five excavations along the Hā'ena State Park dunes to characterize the prehistoric use of the area. Based on their findings, they provided a preliminary sequence of human settlement and subsistence beginning with a marine oriented occupation at Kē'ē Beach sometime before 1000 A.D. After 1000 A.D., occupation expanded at Kē'ē, as well as inland utilizing a broader resource base. Further intensification occurred after 1400 A.D. with the construction of the agricultural fields and lo'i.[2]

The whole area of Kē'ē and Hā'ena was once part of the original hula hālau connected to Laka and Honored by Hā'ena ali'i nui Lohi'au, whose house is located at the base of Pu'u Makana.[3] Historic sites include:

- Ka Ulu a Paoa Heiau;
- Ka Ahu a Laka hula platform;

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[1] Yent, Martha, *Hā'ena Archaeological Complex*, 1983, National Register of Historic Places Register Form, prepared by Division of State Parks, Department of Land and Natural Resources, DEIS, page 114.

[2] Hammatt, Hallett H., Myra J. Tomonari-Tuggle, and Charles F. Streck. 1978, *Archaeological Investigations at Hā'ena State Park, Halele'a, Kaua'i Island, Phase II: Excavations of beach localities and visitors facilities area,* prepared by Archaeological Research Center Hawai'i, Inc., prepared for the Division of State Parks, Department of Land and Natural Resources, Lāwa'i: November 1978, DEIS, page 113.

[3] Orr, Maria, 2010, *Hā'ena State Park Master Plan/EIS Cultural Impact Assessment,* prepared for PBR HAWAII & Associates, Inc., DEIS, page 123.

- Lohi'au's house site; and
- Wai a Kanaloa and the Waiakapala'e caves

OHA recommends consultation be initiated with the following individuals and community organizations who may be willing to share their mana'o on the assessment with you:

- Chipper Wichman – National Tropical Botanical Gardens, Kama'aina of Hā'ena
- Kawika Winter, Ph.D. – Limahuli Gardens and Preserve
- Uncle Thomas Hashimoto – Kaua'i Aha Moku Advisory Committee and Hui Maka'āinana o Makana Member
- Kevin Chang - Kua'āina Ulu 'Auamo
- Maka'ala Ka'aumoana – Hanalei Watershed Hui
- Mehana Vaughn, Ph.D. – University of Hawai'i, Assistant Professor, Department of Natural Resources and Environmental Management and Hui 'Āina Momona

Please know that this list is not all encompassing and we are sure additional individuals will be identified as you move forward with your consultation process.

As this project moves forward, OHA does request assurances that should iwi kūpuna or Native Hawaiian cultural deposits be identified during ground altering activities related to this project, all work will immediately cease and he appropriate agencies, including OHA, will be contacted pursuant to applicable law.

Mahalo for the opportunity to provide comment for this project. Should you have any questions, please contact Kathryn Keala at (808) 594-0272 or kathyk@oha.org.

'O wau iho nō me ka 'oia 'i'o,

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC:kk

C: Kaliko Santos, OHA Kaua'i Community Outreach Coordinator (*via email*)

DAVID Y. IGE
GOVERNOR OF HAWAI'I

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

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON P.E.
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
POST OFFICE BOX 621
HONOLULU, HAWAI'I 96809

REF:OCCL:TM

Correspondence: KA 17-91

NOV - 9 2016

MEMORANDUM

TO: Curt A. Cottrell, Administrator
Division of State Parks

FROM: Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

SUBJECT: Draft Environmental Assessment for the Proposed Hanakāpī'ai Stream Bridge and Additional Trail Located Within the Nāpali Coast State Wilderness Park, Kaua'i, TMK: (4) 5-9-001:001

The Office of Conservation and Coastal Lands (OCCL) has reviewed the draft Environmental Assessment (EA) regarding the subject proposal. According to the information presented in the draft, an aluminum truss bridge, pre-fabricated off-site is proposed to be flown into the Valley in three segments to be placed on constructed reinforced concrete abutments traversing across the Hanakāpī'ai Stream. In addition, a new section of trail approximately 50-feet long x 4-feet wide would also be created along the hillside.

We offer the following comments:

Under the no action alternative, there appears to be more cost effective alternatives that have been previously contemplated but were not included in the draft EA such as a stream gage warning device and sheltering in place. According to the draft EA a shelter was created in 2016 that has been stocked with water and provisions. Sheltering in place and waiting out stream conditions should be an expected option for hikers.

According to the draft EA within Section 4.3 Hawai'i Coastal Zone Management Program, Public Participation, it is stated: "During the planning process, State Parks has engaged regulatory agencies, community groups, and other stakeholders and responded to their comments and questions." These conversations should be included with the EA.

According to the draft EA a proposed Management Plan for the Nāpali Coast State Wilderness Park will provide the guidance on management options supported by the community, in concert with implementation of the Hā'ena State Park Master Plan, that will regulate visitation to the two Parks. The Hā'ena State Park proposes to impose limits on the number of visitors allowed to

enter the park to 900 individuals per day that would limit access to the Nāpali coastal trail also to 900 as hikers have to pass through Hā'ena Park as well.

The draft EA states, "because the timeframe of getting the MP approved and then implemented is longer than that of this bridge approval and construction [presumptuous] there would likely be a period during which the bridge exists but the limitations do not. Given the urgency of the health and human safety threat, the bridge is needed to improve the safety of hikers in the park and decrease the cost of rescuing stranded individuals."

According to the draft EA visitation to Hanakāpī'ai and the Kalalau Trail has increased from 1,000 to 2,000 visitors per day. The Nāpali trail is heavily advertised and social media has also contributed to its popularity. It is our understanding that the preferred alternative is not supported by all. It is important to include an over view of public discourse in environmental documents even if contrary to your project objectives, especially when seeking a Finding of No Significant Impact (FONSI) determination.

State Parks should consider completing and implementing an Interim Management Plan, limiting and controlling access at the trail head prior to the construction of any significant improvement of existing pathways, until the Management Plan for the Nāpali Coast State Wilderness Park is ready to be executed.

The OCCL notes on March 12, 1982, the Board of Land and Natural Resources approved Conservation District Use Permit (CDUP) KA-1373 to establish the Na Pali Coast State Park Boundaries and Land Use subject to 7 conditions. The proposed land uses (bridge and trail) appear to be an identified land use pursuant to the Hawaii Administrative Rules, §13-5-22 P-9 (B-1) Construction or placement of structures accessory to existing facilities or uses. This would require Site Plan Approval (SPA). The SPA application can be found on our website at dlnr.hawaii.gov/occl.

With the SPA application please include evidence of compliance with the conditions of CDUP KA-1373 [attached]. Should you have any questions regarding this memorandum, contact Tiger Mills of our Office at (808) 587-0382.

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

DIVISIONS:
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

FILE NO.: KA-10/7/81-1373
180-Day Exp. Date: 4/15/82

March 12, 1982

Board of Land and
Natural Resources
State of Hawaii
Honolulu, Hawaii

Gentlemen:

Conservation District Use Application to Establish
Na Pali Coast State Park Boundaries and Land Use, Na Pali Coast
at Hanalei/Waimea, Kauai, Hawaii

APPLICANT:	State of Hawaii Department of Land and Natural Resources Divisions of State Parks, and Forestry and Wildlife P. O. Box 621 Honolulu, Hawaii 96809
LANDOWNERSHIP:	State of Hawaii
LOCATION:	TMK: 5-9-01: 1, 2, 3 portions and TMK: 1-4-01: 7, 14 portions
AREA OF PARCEL:	6440 acres
SUBZONE:	Protective and Resource

DESCRIPTION OF AREA:

The subject area is located along the northern coast of Kauai and includes that area between Haena State Park on the east coast and Makaha Point on the west coast.

This area is accessible to the public by walking and by boat, during summer. Presently, helicopters are not authorized to land within the park area.

The Na Pali Coast Management Plan describes the scenic, natural, cultural, wildland and marine resources present in the area.

CURRENT USE:

State Park and Forest Reserve, as proposed in the Na Pali Coast Management Plans, with the exception of the recommended Hono O Na Pali Natural Reserve.

PROPOSED USE:

The purpose of this Conservation District Use Application is to establish the Na Pali Coast State Park in order to implement the Na Pali Coast State Park Management Plan and enforce park regulations to control public use of the area.

ITEM H-3

Board of Land and
Natural Resources

KA-1373
March 12, 1982

as TMK 5-9-01: 1, 2, 3, (por.) and 1-4-01: 7, 14(por.), a total of 6440 acres be approved subject to the following conditions:

1. That the applicant comply with all applicable statutes, ordinances, rules and regulations of the Federal, State and City and County governments, and applicable parts of Section 13-2-21 of Title 13, Chapter 2, as amended;

2. Other terms and conditions as prescribed by the Chairman;

3. That the applicant in conjunction with our Division of Conservation and Resources Enforcement immediately take steps to develop and implement an enforcement policy relating to the "pack in/pack out" concept.

4. That the applicant through the Historic Sites Section implement those measures including increasing existing vegetation cover or rerouting trails such that identified cultural resources are protected.

5. That the applicant comply with all applicable Public Health Regulations.

6. That should the proposed Hono O Na Pali Natural Area Reserve not be approved by the Board via the CDUA process in the future, at elevations below 1200 feet, be incorporated into the Na Pali State Park and subject to conditions of this approval.

7. In that this approval is for use of conservation lands only, the applicant shall obtain appropriate authorization through the Division of Land Management, State Department of Land and Natural Resources for the occupancy of State lands.

Respectfully submitted,

ROGER C. EVANS
Staff Planner

Attachments

APPROVAL FOR SUBMITTAL:

SUSUMU ONO, Chairman
Board of Land and Natural Resources

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

EPO 16-358

October 19, 2016

Ms. Alison Andrews
Tetra Tech, Inc.
737 Bishop Street, Suite 2340
Honolulu, Hawaii 96813
Email: ali.andrews@tetratech.com

Dear Ms. Andrews:

SUBJECT: Draft Environmental Assessment (DEA) for Hanakapiai Stream Bridge Project
TMK: 4-5-9-001: 001

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEA to our office via the OEQC link:
http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2010s/2016-10-08-KA-5B-DEA-Hanakapiai-Stream-Bridge.pdf

We understand from the OEQC publication form project summary that the Department of Land and Natural Resources, through the Division of State Parks and the Engineering Division, proposes to install a 4-foot wide, 82-foot long aluminum truss pedestrian bridge across Hanakapiai Stream and construct approximately 50 feet of new trail to connect the bridge to the existing Kalalau Trail in the Napali Coast State Wilderness Park, on Kauai Island, Hawaii.

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance and laws. State standard comments and available strategies to support sustainable and healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments.

EPO has recently updated the environmental Geographic Information System (GIS) website page. It now compiles various maps and viewers from our environmental health programs. The eGIS website page is continually updated so please visit it regularly at: http://health.hawaii.gov/epo/egis.

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings.

We suggest you review the requirements of the Clean Water Branch (HAR, Section 11-54-1.1, -3, 4-8) and/or the National Pollutant Discharge Elimination System (NPDES) permit (HAR, Chapter 11-55) at: http://health.hawaii.gov/cwb. If you have any questions, please contact the Clean Water Branch, Engineering Section at (808) 586-4309 or cleanwaterbranch@doh.hawaii.gov. If your project involves waters of the U.S., it is highly recommended that you contact the Army Corps of Engineers, Regulatory Branch at: (808) 835-4303.

In order to better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design. Thank you for the opportunity to comment.

Mahalo nui loa,

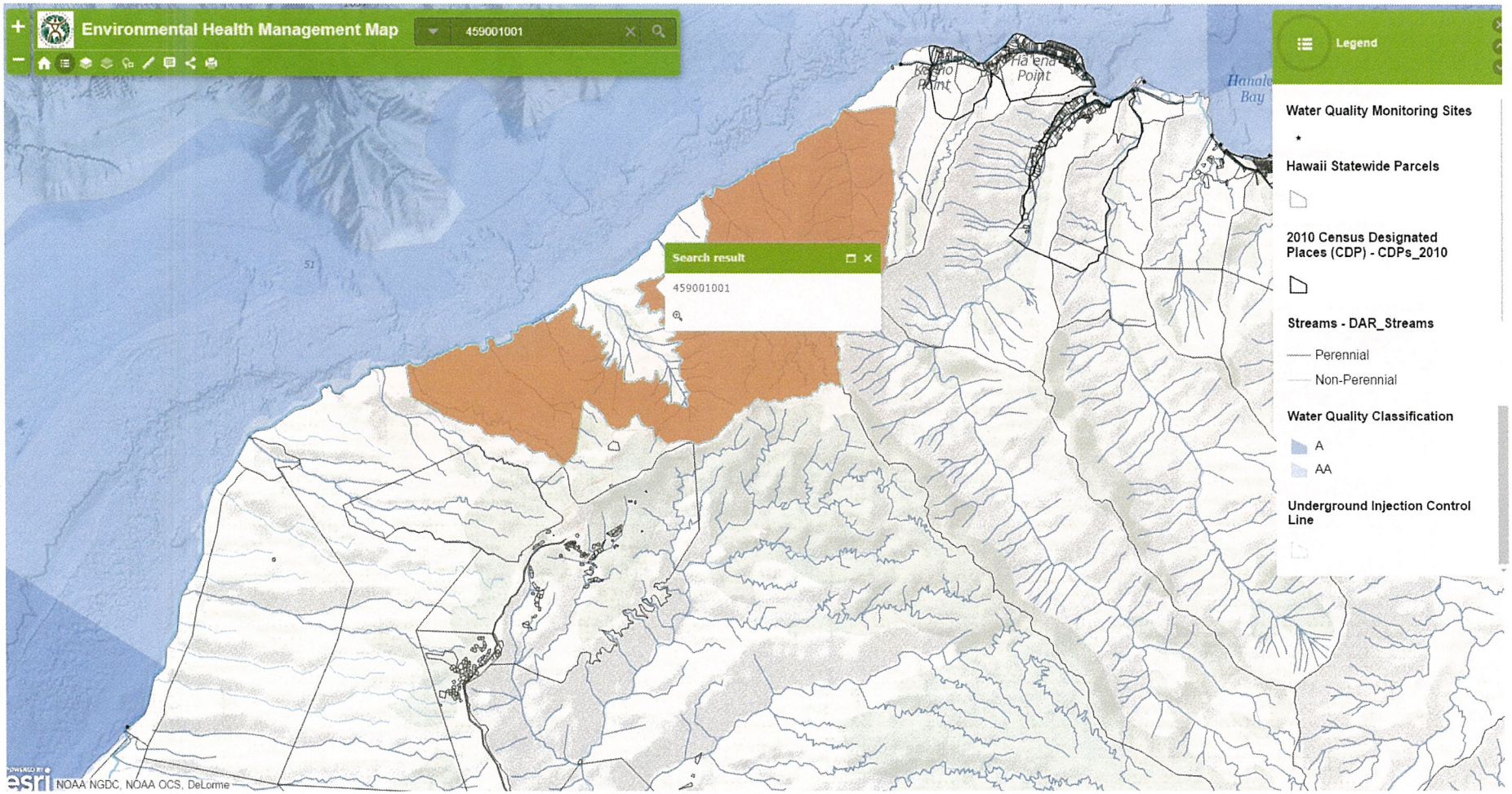
Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

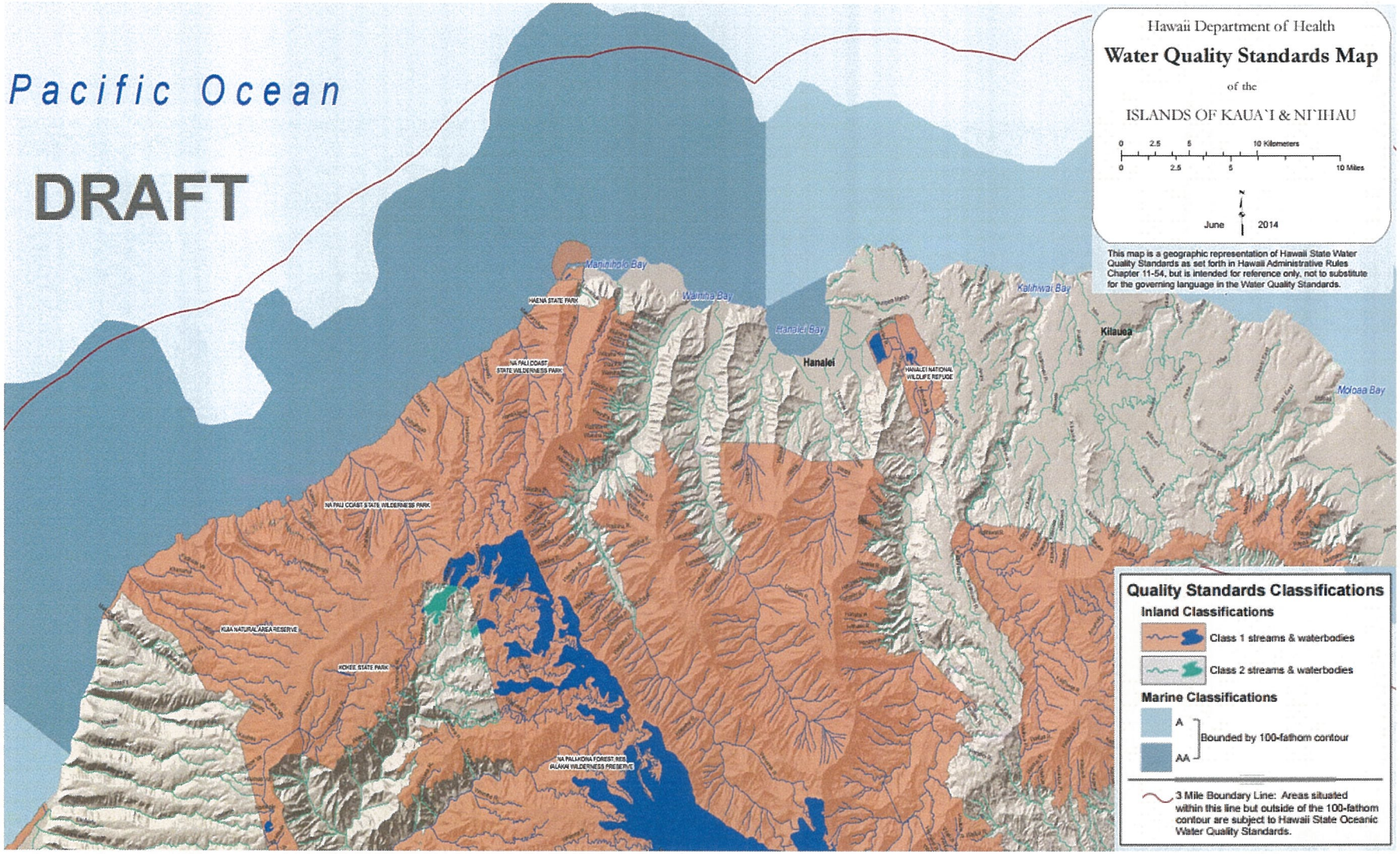
Attachment 1: Environmental Health Management Web App Snipit of Project Area: http://health.hawaii.gov/epo/egis
Attachment 2: Clean Water Branch: Water Quality Standards Map - Kauai
Attachment 3: Wastewater Branch: Recycled Water Use Map of Project Area

c: Lauren Tanaka, DLNR, Parks Division {via email: lauren.a.tanaka@hawaii.gov}
DOH: DHO Kauai, CWB {via email only}

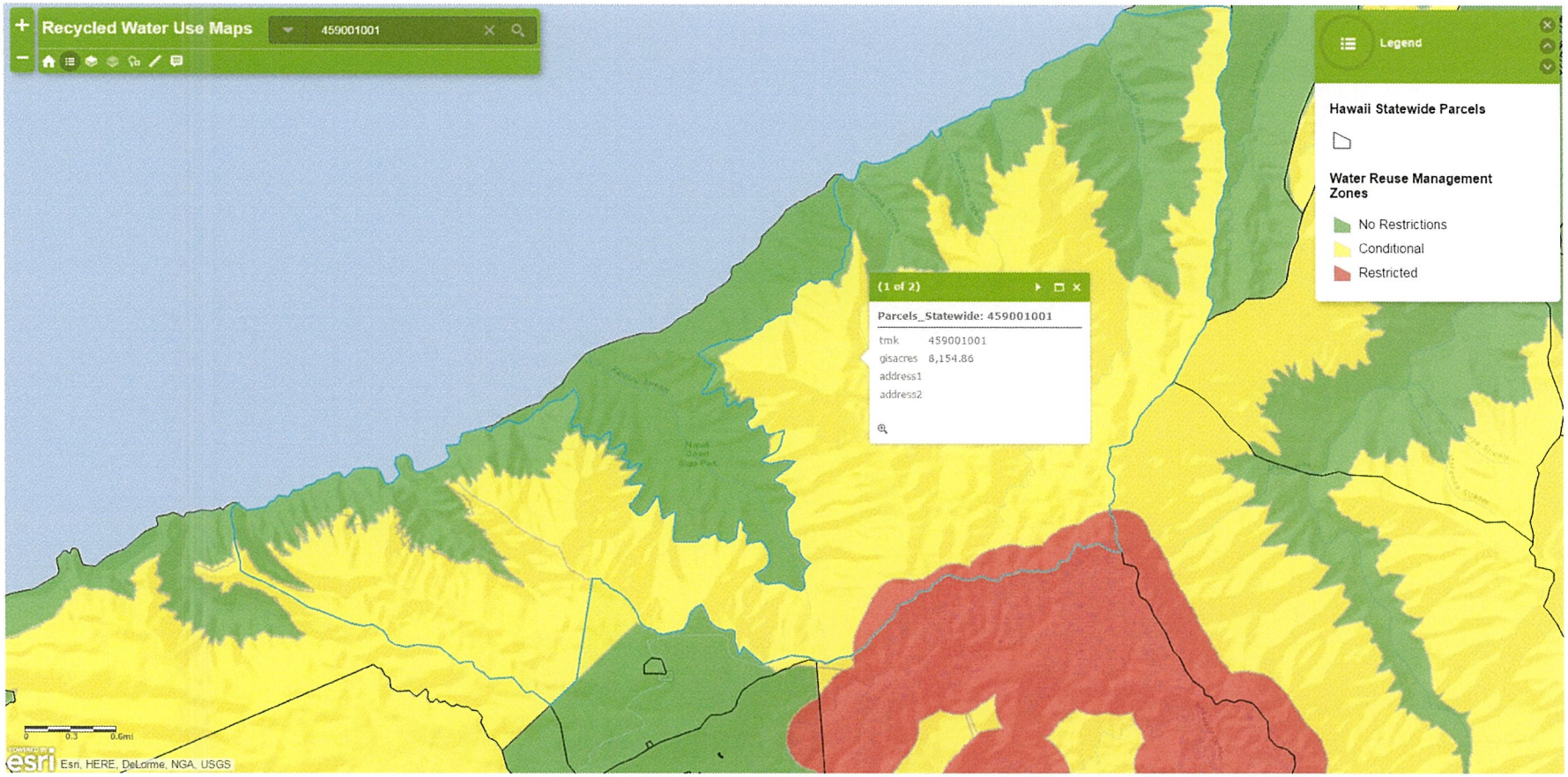
Attachment 1: Environmental Health Management Web App Snipit of Project Area: http://health.hawaii.gov/epo/egis



Attachment 2: Clean Water Branch: Water Quality Standards Map - Kauai



Attachment 3: Wastewater Branch: Recycled Water Use Map of Project Area



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
3060 Eiwa Street, Room 306
Lihue, Kauai, HI 96766

November 4, 2016

TO: Lauren A. Tanaka, Division of State Parks Planner

FR: Sheri S. Mann, Division of Forestry & Wildlife Kauai District Manager SSM

RE: Draft Environmental Assessment – Hanakapi'ai Stream Bridge Project – Na Pali Coast State Wilderness Park, Kauai, Hawaii

Dear Ms. Tanaka:

The Department of Land and Natural Resources, Kauai Division of Forestry and Wildlife (DOFAW) is in receipt of your letter dated October 7, 2016, requesting for comments on the Draft Environmental Assessment (DEA) for the proposed Hanakapi'ai Stream Bridge Project, Na Pali Coast State Wilderness Park, Kauai, Hawaii. Our comments are as follows:

Hawaiian Hoary Bat – (HHB) The Hawaiian Hoary Bat (*Lasiurus cinerus semotus*) is known to roost throughout the island of Kauai in mixed native and non-native forest habitats. June to September 15 is the birthing and pup rearing season. They will use trees that are greater than 15 feet or 4.6 meters in height to raise their young. If there are trees (greater than 15 feet in height) that need to be cut or removed, it is recommended that it be done between September 16 and May 31.

If a tree (greater than 15 feet in height) needs to be cut or removed during the pup rearing season, it is recommended that a knowledgeable wildlife biologist in Hawaiian bats be hired to survey the tree(s) prior to tree cutting. Because of the remoteness of the project area, it is likely the construction materials, equipment and personnel will be flown in via a helicopter. Therefore it is recommended that trees near the landing zone (LZ), that need to be trimmed or removed, be done outside of the HHB pup rearing season.

Hawaiian Waterbirds The Hanakapi'ai stream supports feeding habitat for two listed endangered waterfowl species including the Hawaiian Gallinule (*Gallinula c. sandvicensis*) and the Hawaiian Duck (*Anas wyvilliana*). The Hawaiian Coot (*Fulica alai*), Hawaiian Stilt (*Himantopus mexicanus*), Black-Crowned Night Heron (*Nycticorax nycticorax*) and Hawaiian Goose (*Branta sandvicensis*) are not known to use the Hanakapi'ai stream habitat due to frequent flash flooding & heavy human presence. However, if any of these birds are seen in the area, a local trained avian biologist should be contacted for assistance.

Hawaiian Seabirds The Na Pali Coast State Wilderness Park is home to the threatened Newell's Shearwater (*Puffinus newelli*), the endangered Hawaiian Petrel (*Pterodroma sandwichensis*) and candidate species Band-Rumped Storm Petrel (*Oceanodroma castro*). These nocturnal species

are known to nest within the interior mountain range of the park including Hanakapi'ai Valley. The nesting season is from April and mid-December. The Wedge-tailed shearwater (*Puffinus puffinus*), a nocturnal non-listed species, also nest on the north shore of Kauai, but are not known in the Hanakapi'ai section of the State Wilderness Park.

Nocturnal seabirds are highly attracted to bright lights and are known to strike man-made structures such as buildings and utility lines. Once a bird falls to the ground, they become easy prey to predators such as cats and dogs. Each year, hundreds of fledging seabirds are rescued, rehabilitated and released back into the wild; unfortunately though some are injured or killed as a result. It is strongly recommended that the bridge construction project be conducted during day light hours only. Night time work using construction lights should not be conducted. Additionally, if seabirds fly along the river to and from their mauka burrows, it may be necessary to put reflective tape on the sides of the bridge to deter collisions.

Ecosystem Threats

Feral Cats

On page 17 of the DEA under Current Threats to the Ecosystem, it should be mentioned that the presence of feral cat (*Felis catus*) colonies pose important threats to native birds, particularly sea and forest birds. The perpetuation of feral cat colonies is causing a direct threat to native birds as has been documented on video and still cameras numerous times. Hikers and campers have been seen feeding feral cats along beach & camping areas especially in the Kalalau area. It is recommended that all contract workers be mindful not to feed cats or throw any food on the ground. Cats harbor parasites that cause toxoplasmosis, which is detrimental to humans and marine animals including the endangered Hawaiian Monk Seal (*Neomonachus schauinslandi*). Signage is recommended to deter feeding feral cats.

Rapid Ohi'a Death (ROD) poses a great to Kauai's natural environment including the Na Pali Coast State Wilderness Park. Because the construction materials, equipment and personnel will be flown in and out (some possibly from Hawaii Island), it is imperative that the construction company follow the ROD guidelines to prevent its spread. These guidelines may be found in the College of Tropical Agriculture and Human Resources - http://cms.ctahr.hawaii.edu/rod/Home.aspx.

Erosion from heavy machinery or materials can have deleterious impacts to inland riparian areas and near shore marine habitats. Much care should be taken to mitigate for any erosion to top soil, cliff walls or riparian zones. Additionally, that river frequently has flash floods that bring the river level up significantly. The bridge should be constructed so that flash flooding will not impact under bridge stabilizing beams or structures.

If you have any questions or need assistance, please call Mr. Thomas Ka'iakapu at 808-274-3440 or email Thomas.J.Kaiakapu@Hawaii.gov or Sheri S. Mann 808-274-3436 Sheri.S.Mann@hawaii.gov

Mahalo for the opportunity to comment.

CC: David G. Smith

Andrews, Ali

From: Griesemer, Adam <adam_griesemer@fws.gov>
Sent: Thursday, November 10, 2016 11:05 AM
To: Lauren.A.Tanaka@hawaii.gov
Cc: Andrews, Ali
Subject: Technical Assistance for Hanakapiai Stream Bridge Project

Hi Lauren,

The Service received your letter, dated October 7, 2016, requesting our comments on the draft environmental assessment (EA) for the Hanakapiai Stream Bridge Project. The State of Hawaii, Division of State Parks (DSP) proposes to build a pedestrian bridge over Hanakapiai Stream for use by hikers along the Kalalau Trail in the Napali Coast State Wilderness Park on the Island of Kauai. The project addresses safety of hikers that cross the stream on foot. The proposed bridge will be four feet wide and eighty feet long and span the stream from bank to bank. Approximately 200 square feet of vegetation will be removed, including one native hala tree.

Based on our telephone discussion on November 11, 2016, we understand DSP has established procedures in place to avoid impacts to listed species during any management or construction activities and monitors contractors to ensure implementation of best management practices. We also understand that an email providing our comments, rather than a signed letter, is sufficient for DSP's review process for this project. The following comments are in accordance with the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 et seq.).

In addition to the native seabirds that occur in the area and Newcomb's snail critical habitat described in the draft EA, the Hawaiian hoary bat (*Lasiurus cinereus semotus*) may also occur in the project area. To avoid impacts to seabirds, the project will not entail any nighttime work or use of lights at night. We acknowledge that the draft EA states that the presence of proposed bridge will not affect stream hydrology, including the stream's peak flow rate and water surface elevation, which will avoid potential impacts to Newcomb's snail habitat. To avoid impacts to bats, woody plants greater than 15 feet tall will not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15).

The Service appreciates your efforts to conserve threatened and endangered species.

Regards, Adam

Adam Griesemer
Endangered Species Biologist
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
7370-K Kuamoo Rd., Kapaa, HI 96746
Office: (808) 822-2175
Cell: (808) 285-8261

cultural sites in Kalalau. It is possible the group could consider doing the same at Hanakāpīʻai or perhaps another similar type group could endeavor to maintain and/or restore cultural sites in Hanakāpīʻai. Such opportunities open the door for the full range of cultural practices to be done in the *moku* as done around Kauaʻi. Such has been the case at sites the ʻOhana has done its work and a great many people from around Kauaʻi and beyond have benefitted from these opportunities.

Given the location of identified features by archeological data presented in Tomonari-Tuggle (1989) and the various *wahi pana* described in Appendix C, and given the topographical and geographical features deemed most appropriate to anchor the two ends of the spanning bridge for stability, the proposed spanning bridge does not appear to infringe or otherwise disturb manmade features in the immediate area of the proposed bridge. Features *ma uka* and *ma kai* of the proposed foundation of the bridge on both the east and west sides of Hanakāpīʻai Stream are located several meters away and therefore should remain intact.

3.13 Secondary and Cumulative Impacts

Secondary impacts are those impacts that manifest as an indirect result of the proposed bridge. Cumulative impacts are those that manifest as a result of this action in the context of other actions, past present and future, at the same location.

With increased visitors to the Hāʻena State Park and the Nāpali Coast State Wilderness Park and their impacts upon park resources, DLNR recognizes the need to manage this situation. A proposed Management Plan for Nāpali Coast SWP will provide the guidance on management options supported by the community. In concert with implementation of the Hāʻena State Park Master Plan, this will regulate visitation, because increased traffic on the trail could result in degradation of the natural environment and cultural resources as well as a diminished sense of isolation and immersion in nature that many hikers seek in the state park. The Division of State Parks, however, does not believe that keeping the dangerous conditions at Hanakāpīʻai Stream is the best way to manage park usage. Abstaining from constructing a bridge at Hanakāpīʻai Stream would not be the most effective way of managing visitation because visitors have already invested effort in hiking the two miles to reach Hanakāpīʻai Valley. They are presently undeterred by the inconvenience of fording the stream. The ideal place, however, to regulate visitation is at the trailhead at Hāʻena State Park, which is being proposed by the Division of State Parks (Personal Communication, Alan Carpenter, Division of State Parks, 2015).

In the case that the proposed bridge causes an increase in the number of visitors, the issue of managing park visitation is already being addressed by the Division of State Parks through the Hāʻena State Park proposed MP and associated Draft Environmental Impact Statement submitted in July 2015. In the MP, Division of State Parks cites an increasing number of visitors over the past 30 years which could have detrimental effects on the natural and cultural resources in the area (see Table 3-1). In response, Hāʻena State Park proposes for the first time to impose limits on the number of visitors allowed to enter the park to 900 people per day. Because hikers have to pass through Hāʻena State Park to reach the Kalalau Trailhead, access to the trail and Hanakāpīʻai would be limited to 900 daily visitors as well. (DLNR Division of State Parks 2015). Because the timeframe of getting the MP approved and then implemented is longer than that of this bridge approval and construction, there would likely be a period during which the bridge exists but the limitations do not. Given the urgency of the health and human safety threat, the bridge is needed to improve the safety of hikers in the park and decrease the cost of rescuing stranded individuals.

Commented [BA1]: Will the park be closed to hikers at any time during the 10 week construction period? If so, I do not see an analysis of secondary impacts that could result from the ~2000 hikers/day which may arrive, be denied their day's plans and then choose to go to another destination in the area.

From an emergency management perspective, are there more risky adventures that some might choose once denied access to the Kalalau trail?

Will abnormal amounts of two way traffic on the one way bridges cause gridlock which prevents access by emergency personnel?

Etc.

impacts to air quality and noise.

The Project would also benefit the public by improving public safety for recreational users and emergency responders in the area while minimally altering or affecting the environment.

6 Irreversible and Irretrievable Commitment of Resources

A commitment of resources is irreversible when the primary or secondary impacts limit the future options for a resource. An irretrievable commitment refers to the use or consumption of resources that are neither renewable nor recoverable for future use.

The Project would require the irreversible and irretrievable commitment of fiscal, human, and material resources for its construction. These commitments would be minimal and are considered appropriate since hikers and emergency responders would benefit from improved safety on the trail.

A small area of land would be committed to the proposed bridge footprint; however, this commitment would not be irreversible or irretrievable since the land could be restored to a pre-Project state, if future conditions warrant.

Commented [BA3]: I am not sure what the working definition of "land" is, but I interpret this to mean both the surface and subsurface of the "aina."

I don't believe micropiles can be removed, and therefore I don't know if this statement is entirely accurate.

7 Determination

The proposed bridge installation is not expected to have any significant negative impacts on the environment. The site's climate, geology, topography, soils, hydrology, water quality, natural hazards, air quality, and historic and cultural resources are not expected to be affected by the Project. Minimal impacts on the site's flora and fauna, noise, air quality, public access and recreational use are expected to occur during construction and cease post-installation. The Project may have minimal lasting impacts on visual resources and recreational use, which will be addressed through mitigation measures. The Project is expected to positively impact health and safety.

State Parks, the accepting agency, has determined a FONSI for this EA pursuant to Chapter 343, HRS. This finding is based on the impacts and mitigation measures examined in this document and the analysis under the criteria in Section 11-200-12, HAR.

8 Consultations

8.1 Pre-Assessment Consultations

Pre-assessment consultation was conducted with stakeholders from local agencies and the community in Hā'ena in March 2015 to solicit feedback about the proposed stream bridge. The purpose of this scoping meeting was to solicit input from state and local agencies, organizations, and individuals with technical expertise, or that may have an interest in or be affected by the Project. Input received at this meeting was used to inform the content of the Draft EA . A list of agencies and other stakeholders who were contacted about this meeting and/or attended can be found in Appendix A.

Commented [BA4]: Delete space

8.2 Draft EA Comment Period

The Draft EA will be published in the State of Hawai'i Office of Environmental Quality Control's *The Environmental Notice*, on October 8, 2016, initiating a 30-day public comment period. Draft EA consultation letters were mailed to the parties identified in Appendix B, along with the publication date of the Draft EA.

Bernard P. Carvalho, Jr.
Mayor

Wallace G. Rezentes, Jr.
Managing Director

Michael A. Dahilig
Director of Planning

Ka'āina S. Hull
Deputy Director of Planning

PLANNING DEPARTMENT
County of Kaua'i, State of Hawai'i
4444 Rice Street, Suite A-473, Līhu'e, Hawai'i 96766
TEL (808) 241-4050 FAX (808) 241-6699

NOV - 9 2016

Suzanne Case, Director
Office of Environmental Quality Control
Department of Land and Natural Resources
235 S. Beretania Street, Suite 702
Honolulu, HI 96813

Subject: Draft Environmental Assessment
Applicant – Department of Land and Natural Resources
Hanakāpī'ai Stream Bridge Project
Tax Map Key (4) 5-9-001:001

Based on information submitted, the Planning Department has completed its review and assessment of the proposed development and offer the following comments:

1. The Planning Department has **concerns** regarding the construction of a bridge over the stream prior to having DLNR staff on-site at the trailhead managing park visitation as proposed in the Hāena State Park Master Plan. Additionally, this bridge was not mentioned during the public outreach meetings on the park master plan.

2. The addition of a bridge may provide a false sense of security to hikers that are not prepared or who are inexperienced hikers. Section 1.3 acknowledges that the proposed bridge may encourage more visitors to access Hanakāpī'ai Beach which is one of the most dangerous beaches on the island and further destinations along the Kalalau Trail. The department is not satisfied with the conclusions as there are conflicting statements regarding the increase of use in the trail and advertisements attracting visitors to the site as described in Section 3.10. Increased visitor traffic on the bridge may also trigger more individual rescues by enabling hikers to travel beyond their limits.

3. A Special Management Area Use Permit will need to be approved by the Planning Commission prior to issuance of permits. The application should address the cumulative impacts to the park including but not limited to traffic, parking, on-site management, sanitary facilities and impacts to culturally sensitive areas and native species.

4. An alternative may be to add gates to the bridge which would allow access only during emergency conditions. We agree with the Fire Department that the bridge would alleviate the burden on the emergency responders and may be an option for mitigation. However, our concerns would be focused more upon the potential for an increase in emergency response calls due to the potential for added traffic to and beyond the bridge.

5. The proposed bridge will result in minor to moderate adverse visual impacts within the Special Management Area as stated by the Applicant.

6. Our office has received opposition against a bridge in favor of a zip-line for emergency use only from Sabra Kauka, President of Napali Coast Ohana. (attached)

Should there be any questions regarding this mater, please contact the department at 808.241.4050.

MICHAEL A. DAHILIG
Director of Planning

Enc.

Jody Galinato

From:	sabrakauka@aol.com
Sent:	Monday, October 10, 2016 10:40 AM
To:	Mike Laureta
Cc:	Jody Galinato; mwhite@ssfm.com; Marie Williams; Leanora Kaiaokamalie; Ruby Pap; Marisa Valenciano
Subject:	RE: The Environmental Notice for October 08, 2016

Aloha Kakou,
The Napali Coast Ohana support a zip-line, rather than a bridge. We propose that the leading edge, the highest part of the line, be on the Northwest (or Kalalau) side of the stream. We understand that the purpose of this zip-line is for emergency use only.

We support the safety of both hikers and our emergency response personnel.

Mahalo for your attention to this urgent matter.

Sabra Kauka
President, Napali Coast Ohana
Caretakers of Nu'alolo Kai, Miloli'i and Kalalau
Under an agreement with Hawai'i State Parks.

Sent from AOL Mobile Mail

Department of Water
County of Kaua'i

Water has no substitute.....Conserve it

November 14, 2016

Ms. Lauren Tanaka
DLNR – State Parks
1151 Punchbowl Street
Kalanimoku Building, Room 310
Honolulu, HI 96813

Dear Ms. Tanaka:

Subject: Draft Environmental Assessment: Hanakapiai Stream Bridge Project, Napali Coast State Wilderness Park, Kauai

This is in regard to your letter dated October 07, 2016. We have no objections to the proposed Draft Environmental Assessment.

If you have any questions please contact Ms. Regina Flores at (808) 245-5418.

Sincerely,

Edward Doi

Edward Doi
Chief of Water Resources and Planning Division

Hanakapiai Bridge Draft EA, T-18516, Tanaka, Lauren/RF:mlm

4398 Pua Loke St., P.O. Box 1706, Lihue, HI 96766 Phone; 808-245-5400
Engineering and Fiscal Fax: 808-245-5813, Operations Fax: 808-245-5402, Administration Fax: 808-246-8628

Hui Maka'ainana O Makana

P.O Box 1225
Hanalei, Hawaii
thiwann@yahoo.com

November 7, 2016

Ms. Lauren Tanaka c/o Hawaii State Parks
1151 Punchbowl St. Room 310
Honolulu, HI 96813

Aloha Lauren,

Sorry for the late response on such a important issue, I wanted to contact what ever Hui members I could. Unfortunately, we have not had a Ohana Council meeting for October to get the Hui's approval. There for, I can not represent the Hui's Membership. However after hearing and talking to some of our Kaua'i rescue personnel's concerns, I personally, feel there is a need for the bridge and support it's construction maybe it can be temporary? I feel that the increasing amounts of visitors to the Ha'ena and NaPali coast and DLNR and DOCARE's overwhelming workload have the ability to stop uneducated and unaware visitors. This problem will only increase. I have friends who are the very rescuers that respond to these emergencies. I feel whatever measures can be taken to limit their exposure and insure their safety is paramount. Also, I have personally witnessed total disregard for Park personnel by some hikers and visitors when the trails were deemed close and they were advised not to go on the trail. I ,also feel, this type of blatant behavior should be punishable and made responsible for any rescue regardless of the circumstances. I hope that the Ha'ena Park Master Plan and it's proposed visitor cap will help address this problem before any more deaths occur.

Mahalo and Sincerely yours,

Presley Wann (Currently the President for the Hui Maka'ainana O Makana)

Presley V. Wann

Hanalei-Ha'ena Community Association
Post Office Box 1072
Hanalei, HI 96714

November 4, 2016

Lauren Tanaka
Department of Land and Natural Resources, Division of State Parks
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Alison Andrews
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Re: Draft Environmental Assessment, Hanakāpīʻai Stream Bridge Project

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The Hanalei-to-Ha'ena Community Association (HHCA) submits the following comments on the Draft Environmental Assessment (DEA) for the proposed Hanakāpīʻai Stream Bridge Project ("Bridge"). As the HHCA's members live in the three communities that are located closest to the proposed Bridge, many of the members have extensive experience and insights related to the trail.

The HHCA believes that: (i) the Bridge, as proposed, would be growth-inducing; (ii) the Bridge, as proposed, would result in an increase in visitors' exposure to hazards; (iii) safer, non-growth-inducing alternatives were not included in the DEA; and (iv) the "Anticipated Finding of No Significant Impact" is therefore not justified.

1. **The HHCA strongly disagrees with the unfounded assertions, made throughout the DEA, that the Bridge would not be growth-inducing**. To the contrary, we believe that the proposal to construct this bridge without simultaneously addressing its very clear growth-inducing impacts, will result in more people crossing the Hanakāpīʻai Stream during unsafe conditions, and expose more people to the hazards of dangerous surf at Hanakāpīʻai Beach and dangerous conditions on the Hanakāpīʻai Falls Trail.

   There are more than a dozen places in the DEA where the assertion that the Bridge would not be growth-inducing should be corrected.

   A. DEA Assertion: "*The proposed bridge is not expected to increase the number of visitors accessing Hanakāpīʻai. In recent years, there has been an increase in number of visitors on the trail going to Hanakāpīʻai Beach and Hanakāpīʻai*

Falls, which can be attributed to an overall increase in visitors to Kaua'i, as well as increased recreation and physical activities such as hiking and promotion by social media and online destination sites." (Page 12)

Response: Unless and until daily caps on the use of the Kalalau Trail are instituted and enforced, the construction of the Bridge will encourage more tourists to use the trail as it is obvious that they will be informed (and rightfully so) by tourist guides, "social media and online destination sites" that the formerly hazardous crossing of the Hanakāpīʻai Stream has been eliminated. Not only will this information encourage more tourists to make use of the Kalalau Trail, but it will also encourage a greater number of ill-prepared tourists to make use of the Trail, increasing hazardous behaviors and putting a greater number of both tourists and rescue personnel at risk.

B. DEA Assertion: "*The scenic route and coastal areas of Hanakāpīʻai are the attractions for most visitors, whereas the stream and proposed bridge are part of the trail system that connects visitors to these areas. Therefore, the relatively simple bridge design is not expected to be an added attraction to Hanakāpīʻai... The proposed bridge is not anticipated to attract an increase in the number of visitors to Hanakāpīʻai, as this may be attributable to other factors such as promotion of not easily accessible scenic areas and fascination with Kaua'i's natural resources."* (Page 12)

Response: This statement diverts attention from the real issue. It is obviously true that the bridge itself would not be an attraction, any more than a widened highway to a difficult-to-access scenic area is an attraction. But in both cases, the new infrastructure facilitates and encourages increased visitation to the scenic area.

C. DEA Assertions: "*The bridge is intended to provide a means for stranded hikers to get out of Hanakāpīʻai during times of high stream levels caused by severe weather events*." (Page 12). "*During heavy rain and flash flooding events, the bridge would provide a safe option for hikers to leave Hanakāpīʻai*." (Page 21)

Response: What these statements obscure is the fact that the bridge will also provide a means for additional hikers, who would otherwise be deterred from crossing Hanakāpīʻai Stream by greater-than-minimal stream levels, to cross the Stream to Hanakāpīʻai Beach and the Hanakāpīʻai Falls Trail, increasing the number of people who will then be exposed to hazards at the beach and on the trail.

D. DEA Assertion: "*Additionally, the two mile hike from the Kalalau trailhead to Hanakāpīʻai is rigorous, and unprepared and inexperienced hikers are likely to be deterred and limited by the difficulty of the trail as opposed to being attracted by a bridge*." (Page 12)

Response: First: if it were true that "*unprepared and inexperienced hikers are likely to be deterred and limited by the difficulty of the trail*", there would be no rescue problem in the first place and therefore no need for the Bridge. So the

DEA's assertion does not hold water. Second: contrary to the DEA's assertion, by eliminating the Hanakāpīʻai Stream crossing as a barrier to unprepared and inexperienced hikers, the bridge would enable and encourage more of those hikers to (i) take the trail during rainy conditions; and (ii) continue to Hanakāpīʻai Beach and to the Hanakāpīʻai Falls Trail, exposing more people to hazards.

E. DEA Assertion: "*If and when (*emphasis added*) elements of the Haʻena Master Plan are successfully implemented, visitation to Hanakapi'ai will actually decrease*.

Response: The key part of this statement is "if and when." But State Parks' top management has repeatedly warned the participants in the Ha'ena Master Plan process that, even if the BLNR does approve the proposed Ha'ena Master Plan and its daily visitation limits, it is very unlikely that those limits will actually be implemented until some time in the distant future, based on lack of funding for both infrastructure (the cost to implement a daily permitting system) and manpower (the cost to operate and enforce such a system).

In addition: while a daily visitor limit would reduce trail use on peak days, it would not bind during the non-peak days, including bad weather days during the rainier season, when visitation is below the proposed 900 person per day limit. On those days - precisely the days when the hazards are greatest - the proposed Hanakāpīʻai Stream bridge would facilitate increased usage of the Kalalau Trail, Hanakāpīʻai Beach and Hanakāpīʻai Falls Trail, increasing hazardous outcomes.

F. DEA Assertion: "*It is unlikely that the bridge would cause an increase in foot traffic because under normal conditions, the Hanakāpīʻai Stream crossing is approximately 1-foot deep with relatively slow moving water, which is manageable for most hikers who have the fitness and balance to traverse the first 2 miles of the Kalalau Trail to reach Hanakāpīʻai. The crossing becomes dangerous only under heavy rain conditions and the bridge is intended to provide a safe option to leave this section of the trail*." (Page 21)

Response: To the contrary: the bridge will enable, encourage and attract more people to use the Kalalau Trail (people who currently would not embark on a hike because the weather made it questionable as to whether they might be able to cross Hanakāpīʻai Stream) to visit Hanakāpīʻai Beach or Hanakāpīʻai Falls, exposing them to more risks at those locations.

G. DEA Assertion: "*Hikers continuing inland to Hanakāpīʻai Falls or further along the coastal Kalalau Trail, will encounter additional stream crossings without bridges*." (Page 21)

Response: Indeed, this is the problem that the DEA does not honestly confront: hikers who would be able to take the trail to Hanakāpīʻai Falls (or simply visit Hanakāpīʻai Beach) during dangerous conditions, solely because the proposed bridge made it possible to cross a swollen Hanakāpīʻai Stream rather than turn back (or not embark on the hike in the first place).

H. DEA Assertion: "*The number of hikers in these areas [beyond Hanakāpīʻai Stream] are not expected to increase due to the proposed bridge*." (Page 21)

Response: This statement defies credibility. By eliminating the primary barrier to Hanakāpīʻai Falls and Hanakāpīʻai Beach, the Hanakāpīʻai Stream bridge will certainly increase the number of hikers in those areas.

I. DEA Assertion: "*With increased visitors to the Hāʻena State Park and the Nāpali Coast State Wilderness Park and their impacts upon park resources, DLNR recognizes the need to manage this situation. A proposed Management Plan for Nāpali Coast SWP will provide the guidance on management options supported by the community. In concert with implementation of the Hāʻena State Park Master Plan, this will regulate visitation, because increased traffic on the trail could result in degradation of the natural environment and cultural resources as well as a diminished sense of isolation and immersion in nature that many hikers seek in the state park.*" (Page 22)

Response: As we noted earlier, State Parks' leadership has already warned community members who have been participating in the Ha'ena State Park Master Plan process that it will be many years (if ever) before the visitor limits in that Plan can be implemented. The odds of timely implementation of such limits in a "*proposed* Management Plan for Nāpali Coast SWP," which does not even exist yet, are even smaller.

So the proposed Hanakāpīʻai Stream bridge would be built long before such limits are implemented, resulting in increased exposure of a larger number of visitors (even less-prepared than today, as they would not be stopped by the Hanakāpīʻai Stream) to the hazards of Hanakāpīʻai Beach and the Hanakāpīʻai Falls Trail.

J. DEA Assertion: "*The Division of State Parks, however, does not believe that keeping the dangerous conditions at Hanakāpīʻai Stream is the best way to manage park usage. Abstaining from constructing a bridge at Hanakāpīʻai Stream would not be the most effective way of managing visitation because visitors have already invested effort in hiking the two miles to reach Hanakāpīʻai Valley. They are presently undeterred by the inconvenience of fording the stream. The ideal place, however, to regulate visitation is at the trailhead at Hāʻena State Park, which is being proposed by the Division of State Parks (Personal Communication, Division of State Parks, 2015)*." (Page 22)

Response: In this statement, the DEA admits that some visitors today are undeterred by the inconvenience of fording the stream. Providing a bridge over Hanakāpīʻai Stream can only increase that number, exposing more people to the hazards at Hanakāpīʻai Beach and the Hanakāpīʻai Falls Trail.

We agree that the ideal place to regulate visitation is at the trail head. State Parks would do far better to spend its funds to implement a trailhead management system rather than spend its funds on a bridge that, without a

trailhead management system, will result in increased trail usage and increased visitor exposure to hazards.

K. DEA Assertion: "*In the case that the proposed bridge causes an increase in the number of visitors, the issue of managing park visitation is already being addressed by the Division of State Parks through the Hāʻena State Park proposed MP and associated Draft Environmental Impact Statement submitted in July 2015. In the MP, Division of State Parks cites an increasing number of visitors over the past 30 years which could have detrimental effects on the natural and cultural resources in the area (see Table 3-1). In response, Hāʻena State Park proposes for the first time to impose limits on the number of visitors allowed to enter the park to 900 people per day. Because hikers have to pass through Hāʻena State Park to reach the Kalalau Trailhead, access to the trail and Hanakāpīʻai would be limited to 900 daily visitors as well. (DLNR Division of State Parks 2015)*." (Page 22)

Response: Pointing to the proposed Ha'ena State Park visitation limit as a remedy for the bridge's growth inducing (and risk increasing) impact is disingenuous. As we noted earlier, State Parks' top management has repeatedly stated that the likelihood of implementing any daily visitor limit in the next few years is minimal, due to lack of funding for both the infrastructure and the employees to implement and enforce the limit.

L. DEA Assertion: "*Because the timeframe of getting the [Hāʻena State Park] MP approved and then implemented is longer than that of this bridge approval and construction, there would likely be a period during which the bridge exists but the limitations do not. Given the urgency of the health and human safety threat, the bridge is needed to improve the safety of hikers in the park and decrease the cost of rescuing stranded individuals*." (Page 22)

Response: To the contrary, constructing the bridge without first implementing the daily visitor limits would be irresponsible, as it would decrease rather than increase the overall safety of park users. Supposed "urgency" should not be used as an excuse to move forward with a poorly-conceived project.

2. Even if the Bridge had no growth-inducing impacts, it would increase, not decrease, visitors' exposures to risks. Even if the Bridge did not result in any increase in Kalalau Trail usage (a premise that is neither realistic nor believable, as noted above), the Bridge would result in an larger number of poorly-prepared visitors (those who would normally turn back at Hanakāpīʻai Stream when its water level was beyond minimal) being exposed to the risks at Hanakāpīʻai Beach and along the Hanakāpīʻai Falls Trail (the latter being a day hike that far more day hikers would take if the Hanakāpīʻai Stream crossing was made trivial by the Bridge).

As the DEA notes (on Page 14) "*the vast majority of hikers access the beach as their final destination*." But the DEA also states (on Page 8): "*Hanakāpīʻai Beach is one of the most dangerous beaches on the island, with at least 30 drownings occurring since 1970 (Blay 2011). Strong rip currents swiftly pull swimmers away*

from the beach and down the coast to the west, where there is no safe beach access for over 3 miles."

The Bridge would make Hanakāpīʻai Beach more accessible to those day-hikers who currently turn back at the Hanakāpīʻai Stream by eliminating the current barrier associated with crossing the Hanakāpīʻai Stream. And further, it would expose them to the beach hazards on the days when the weather conditions are worst (the days when they would currently turn back). It makes no sense to construct a Bridge that would create such increased hazards. Yet this serious negative impact of the proposed project is completely ignored in the DEA.

3. **<u>The Alternatives considered in the DEA are insufficient</u>**.

In addition to the proposed project itself being deficient (as neither its growth-inducing impacts nor its exposure of visitors to hazards on the Kalalau side of the Hanakāpīʻai Stream are considered or mitigated), the Alternatives to the Bridge are woefully incomplete. Other than the "No Action" Alternative, the DEA considers only minor variations on the proposed Bridge, rather than considering other alternatives for achieving the ostensible goal (i.e., reducing the need to conduct rescue operations) of the Bridge project.

The DEA Alternatives should be expanded to, at a minimum, include a hiker behavior modification/trailhead management alternative, as it is clear that the irresponsible behavior of hikers is the root of the problem and just as clear that changing such behavior can be the focus of the solution.

As the DEA notes on Page 11, "[*p]reviously, responders would immediately attend to stranded persons who were injured or in imminent danger, then wait for the flooding to recede to help the hikers out of the valley. Recently, however, an increasing number of hikers do not wait for the water to subside and have attempted to cross the flooded stream*." Imposing very significant penalties on trail users who do not comply with orders to not cross the Hanakāpīʻai Stream would both deter much of such behavior and support the costs of a notification and enforcement program.

The DEA Alternatives should therefore include, for the interim period until the permanent systems for management of daily visitor access to Hāʻena State Park and Nāpali Coast SWP are put into place: real-time management of trail access at the Keʼe trailhead and at the Hanakāpīʻai Stream crossing by assigning park rangers at those locations; authorizing those rangers to order trail closures (including closure Hanakāpīʻai Stream crossing); increased signage (including real-time updates) emphasizing the risks at Hanakāpīʻai Stream and Hanakāpīʻai Beach; and implementation of severe financial penalties for trail users who violate closure orders at the trailhead or the stream. Successful implementation of these measures would make the proposed bridge completely unnecessary.

4. **<u>Construction impacts on the neighboring communities need to be mitigated</u>**. Should it ultimately be determined that the Bridge be built (as part of a more-complete proposal that addresses the problems that we have noted above), we note that the DEA states that the construction zone would in part be accessed by

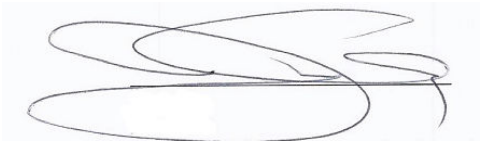
helicopter. We have had much experience in the past with non-tour helicopters flying noisily over our communities, and we therefore note that as a construction impact mitigation measure, all helicopter activity associated with the project must be required to be routed far from the Hanalei, Wainiha and Ha'ena residential communities.

In conclusion: the proposed Hanakāpīʻai Bridge project is ill-conceived and incomplete. Although the Bridge is being marketed as a project to purportedly increase safety, it would not do so. On a very superficial level, the Bridge might seem to be warranted by safety concerns. But the Bridge would actually result in increased visitor exposure to harms, as it is only half-a-project, lacking concurrent implementation of the measures needed to: (i) prevent its growth-inducing effects, and (ii) prevent visitors who would currently turn back at Hanakāpīʻai Stream from proceeding over the proposed bridge and exposing themselves to significant harms at Hanakāpīʻai Beach and the Hanakāpīʻai Falls Trail. Because so many key elements are missing from the Bridge project, it would provide no more of an increase in safety than would a new bridge on an urban highway built without lane-striping, traffic control/speed limit/warning signs or guardrails.

Until the Bridge's inducements of increased visitation and increased hazardous behavior are fully addressed (through concurrent implementation of daily limits on the use of the Kalalau Trail, through real-time closure - and enforcement of such closure - of the Trail and/or the Hanakāpīʻai Stream crossing to day hikers when stream level rises are imminent, and through implementation of severe financial penalties for those who violate closure orders), both the project and the DEA are incomplete and the proposed FONSI is unjustified.

For the reasons stated above, we strongly disagree with the Anticipated Finding of No Significant Impact.

Finally: we note that the HHCA was neither formally consulted on the Draft EA, nor was it included on the DEA Distribution List (Page 26). For more than 25 years, the HHCA has represented the Hanalei, Wainiha and Ha'ena communities and has consistently provided constructive input on matters impacting those communities. We hereby request that the HHCA be added to the Distribution List, and that the HHCA be provided with two hard-copies of all future documents related to this matter, including the SMA Major Use Permit Application and Conservation District Use Permit Application, should the project move forward.



Joel Guy, President
Hanalei-to-Ha'ena Community Association

Caren Diamond, Chair
Hanalei-to-Ha'ena Community Association Land Use Committee

SIERRA CLUB OF HAWAI'I
KAUA'I GROUP

MALAMA I KA HONUA
Cherish the Earth

November 6, 2016

Ms. Lauren Tanaka lauren.a.tanaka@hawaii.gov
Division of State Parks
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Ms. Alison Andrews ali.andrews@tetratech.com
Tetra Tech, Inc.
737 Bishop Street, Suite 2340
Honolulu, Hawaii 96813

Re: Hanakapiai Stream Bridge Project Draft Environmental Assessment

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The Kauai Group of the Sierra Club disagrees with the Anticipated "Finding of No Significant Impact" (FONSI) for the proposed Hanakapiai Stream Bridge Project:

1. The proposed bridge would clearly increase usage of the Kalalau Trail. The future daily limits that are discussed in the DEA are purely speculative, with little probability of being put into place in the near future, as DLNR leaders have repeatedly admitted.
2. The proposed bridge would result in more crossings of the Hanakapiai Stream (at the existing level of Kalalau Trail usage as well as at the increased usage level that the proposed bridge would incite), more usage of Hanakapiai Beach, and more usage of the Hanakapiai Falls Trail, increasing visitor exposure to hazards.[1]
3. The Draft Environmental Assessment is inadequate in that it considers only "hard" infrastructure alternatives and does not address possibly-more-effective "soft" alternatives, such as ranger-enforced closing of the Hanakapiai Stream crossing during actual and anticipated hazardous conditions.

For all of the above reasons, neither the project as-proposed nor the "anticipated" FONSI should be approved.

The Kauai Group of the Sierra Club also requests that it be added to the Distribution List for all future communications related to the proposed project.

Carl F. Imparato,
on behalf of the Kauai Group of the Sierra Club

[1] Page 8 of the Draft Environmental Assessment states: "*Hanakapiai Beach is one of the most dangerous beaches on the island, with at least 30 drownings occurring since 1970.*"

POB 189
Anahola
96703
18 Oct, 2016

Ms. Lauren Tanaka
Department of Land and Natural Resources
State Parks Division
Honolulu, 96813

Aloha, Ms. Tanaka,

Norka Villacorta might still be alive today. If there had been a bridge over Hanakapi`ai stream, she could have crossed safely. Instead, she died trying to clamber over the rocks during flash flood conditions. Moreover, 54 other stranded hikers had to be rescued that day in 2013.

Again, in April 2014 121 hikers had to be airlifted out of Hanakapi`ai during flood conditions. Had there been a bridge over the stream, the risk to them and their rescuers, not to mention the expense to our county might have been unnecessary.

Hanakapi`ai stream already overflows regularly. If, as many predict, future storms will bring stronger winds and heavier rains, it is reasonable to expect more frequent and violent floods. How many more stranded hikers will need rescuing, and how many of our firefighters, lifeguards, and pilots will have to risk their own lives to bring them to safety? Construction of a bridge may not entirely eliminate the need for rescues at Hanakapi`ai and farther along the Na Pali trail, but it can significantly reduce them. Is this not sufficient reason to build that bridge?

Heu`ionalani Wyeth

c/c The Garden Island
Honolulu Star Advertiser

DAVID Y. IGE
GOVERNOR OF
HAWAII

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

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
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CONSERVATION AND COASTAL LANDS
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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2017

Mr. Scott Glenn, Director
Office of Environmental Quality Control
Department of Health
235 S. Beretania St., Suite 702
Honolulu, HI 96813

Dear Mr. Glenn:

We appreciate the concerns expressed on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpīʻai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kauaʻi.

All of your technical edits and clarifications about the environmental review process are appreciated and were incorporated into the FEA. The 13 criteria in Section 11-200-12, HAR, were reviewed and edits to the FEA were made in the appropriate sections to ensure that all 13 were assessed in relevant sections.

For a discussion of climate change impacts manifesting as increased precipitation intensity, we agree that conservative construction is pragmatic, however specific projections of this increase in intensity are hard to ascertain. Whereas sea level rise impacts projections are relatively consistent, downscaled models for precipitation in the Hawaiian Islands are still variable in location and intensity. In the absence of these projections by which to run the hydrological model, we made an effort to site the proposed bridge outside of a potentially expanded floodplain. In the hydrologic modelling (using historical 100-year flood parameters, without bulking factor) used in conformance with the County of Kauaʻ i Water Runoff System Manual, the proposed bridge's freeboard (height between river surface and bottom of bridge) was calculated to be 4.0 feet, which exceeds the County of Kauaʻ i's minimum of 3.0 feet. All components of the bridge remain out of the path of the river and we will include this discussion in the FEA. Tetra Tech, our Consultant, will revise the bridge schematic diagram for clarity. The water surface elevations (WSE) given in the schematic reflect WSE of the modelled 100-year flood, with and without bulking factor (BF), which is why the apparent depth of the stream is over 10 feet. Under non-flood conditions, the stream is 1-2 feet deep.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
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DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2017

MEMORANDUM

To: Leo R. Asuncion, Director
Office of Planning

From: Curt A. Cottrell, Administrator CAC

Subject: Response to Comments on the Draft EA for the Hanakāpīʻai Stream Bridge Project, Nāpali Coast State Wilderness Park; TMK: (4) 5-9-001: 001, Nāpali District, Kauaʻi

This is in response to the comments dated October 31, 2016. Thank you for catching the error in the Project Information Summary which we clarified in the final EA.

The bridge was designed to be completely out of the stream and consultation with the USACE confirmed that no permit is required.

We met with the County Planning Department on the Special Management Area (SMA) Permit requirements and will be submitting our application for an SMA permit when we have completed the Chapter 343, HRS, process.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017. Subsequently, we will continue to work on the obtainment of the required permits for this project. We appreciate your comments on the DEA.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
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COMMISSION ON WATER RESOURCE MANAGEMENT

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
POST OFFICE BOX 621

February 27, 2017

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer
Office of Hawaiian Affairs
580 N. Nimitz Hwy., Suite 200
Honolulu, Hawai'i 96817

Dear Dr. Crabbe:

We appreciate the concerns expressed on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i.

As managers of this unique, historic trail and the Nāpali Coast State Wilderness Park, the Division of State Parks (DSP) agrees with the need to limit the usage of the area to preserve its natural and cultural resources. However, we do not believe that this management has to come at the cost of hiker safety.

What we did not fully explain, and will amend in the Final Environmental Assessment, is that trail closures, on-trail DSP personnel, and permit enforcement will continue as they have in the past and we intend to increase management capacity in the future. During periods of dangerous flooding in Hanakāpī' ai, most hikers would not have access to further dangerous conditions on the far side of the stream because most hikers would be deterred from park entry by the trail closure in place. What the existing protocol cannot account for is the safety of the hikers who may have entered the park before flooding was recognized by DSP. For these individuals, the proposed bridge is needed to provide a safe way to exit the park. A greater understanding of DSP's trail closure protocol may clarify the need for a bridge in addition to trail access management.

Existing trail closure protocol requires a DSP staff member to hike into Hanakāpī' ai Valley to assess the level of flooding in Hanakāpī' ai Stream, after which a trail closure decision is made. This in-person trail closure protocol is required, as opposed to a remote, predictive determination for two reasons: (1) the localized nature of flooding in Hanakāpī' ai, i.e. flooding in neighboring Hanalei cannot be used as an indicator of flooding in Hanakāpī' ai; and (2) the rapid nature of flooding in Hanakāpī' ai, i.e. even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore, we believe it is impracticable to rely upon predictive trail closures to prevent hikers from entering dangerous conditions. The existing trail closure system equally cannot ensure the safety of those hikers who have started hiking the trail before the DSP staff reached Hanakāpī' ai stream, or those who are hiking out of Kalalau or Hanakoa valleys after camping the night before.

For these isolated hikers, the proposed bridge would grant them safe passage across the stream, eliminating the need for expensive and dangerous helicopter rescue missions.

Under normal, non-flood conditions, the 1-foot deep Hanakāpīʻ ai Stream crossing does not pose a significant obstacle to those hikers with the physical ability to traverse the 2-mile trail to reach Hanakāpīʻ ai. In our experience, very few hikers decide not to cross the stream once they have reached it and we do not believe that because of the bridge, more hikers would be able to access Hanakāpīʻ ai Beach.

For these reasons, DSP does not believe that the proposed bridge would increase foot traffic in the valley, potentially threatening cultural and historic resources. We appreciate your participation in the Hāʻ ena State Park Community Advisory Committee and equally appreciate the information you included in your letter regarding the importance of the Hāʻ ena Archaeological Complex. This information will be incorporated, along with other research, into future outreach materials for the area.

Many of the individuals whom OHA suggested we contact are on our DEA distribution list. Going forward, in the outreach planned for this project in the Hāʻ ena area, this list will be noted.

Lastly, in the event that iwi kupuna or Native Hawaiian cultural deposits are found during the construction phases of this project, all work will cease and appropriate agencies immediately contacted, including OHA.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2017

MEMORANDUM

To: Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

From: Curt A. Cottrell, Administrator CAC
Division of State Parks

Subject: Comments on the Draft Environmental Assessment (DEA) for the Proposed Hanakāpīʻ ai Bridge Project, Nāpali Coast State Wilderness Park, Kauaʻi

Thank you for your comments on the Hanakāpīʻ ai Bridge DEA. Our response to those comments follow.

As you suggested, we will add a discussion of the possibility of a stream gauge installation into the FEA to read:

"Installing a stream gauge in Hanakāpīʻ ai Valley was considered but not pursued because the rapid nature of flooding in Hanakāpīʻ ai diminishes the usefulness of a stream gauge warning device. Even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore, it is unrealistic to believe that predictive trail closures can prevent all hikers from entering dangerous conditions. A 19' x 10' shelter and an emergency supplies box have been installed in the valley and is used by hikers in inclement weather. However, it has proven inadequate for stranded hikers. A State Parks official had the experience of instructing stranded hikers to spend the night on the far side of the stream to wait until the flooding subsided. Later that evening, a couple of hikers decided to ford the stream in the dark of night on their own. These dangerous decisions will be continually combatted through education and other 'more cost effective' alternatives. The proposed bridge provides a safe option that does not force the Kauaʻ i County Fire Department to decide whether to rescue stranded hikers or hope they make safe choices on their own."

We apologize for not including previous outreach discussions in the DEA and will include the outreach report as an addendum to the FEA.

Through the scoping and other outreach that was conducted early on in the planning process, State Parks noted the concern about increased visitation to the park, and tried to address it in both Section 1.3 and the expected analysis of recreational use in Section 3.10. We received additional, well-articulated concerns

about increased park visitation during the public comment period and will be summarizing these comments and providing our responses in the FEA.

In consideration, State Parks identified the best pathway for implementing visitor limits on the Nāpali Coast as being through Hā' ena State Park. Given the time and public input already invested in the Hā' ena Master Planning process, it would have been redundant and potentially problematic to address visitation separately for the Nāpali Coast State Wilderness Park. The Nāpali Coast State Wilderness Park already has and executes safety protocols that close the trail during flooding, which will limit the potential for additional hikers that may be encouraged to use the trail because of the proposed bridge. For this reason, it is believed that the proposed bridge would not significantly increase park visitation.

We appreciate knowing that we will not need to apply for a separate CDUP. Instead, we will apply for a Site Plan Approval and include evidence of compliance with the previous CDUP that was approved for this area. Thank you, again, for your comments on the Hanakāpī' ai Bridge Project DEA.

DAVID Y. IGE
GOVERNOR OF
HAWAII

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

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

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HONOLULU, HAWAII 96809

February 27, 2017

Laura Leialoha Phillips McIntyre, Program Manager
Environmental Planning Office
Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Ms. McIntyre:

Thank you for the review and comments on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpīʻai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kauaʻi.

We have reviewed the standard comments and strategies that support sustainable and healthy design and acknowledge the requirements to adhere to all applicable standard comments.

In visiting your department's environmental GIS website, we reviewed information pertaining to environmental health programs and acknowledge the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for discharges of storm water runoff. Best management practices for avoidance and minimization of construction-related impacts are included in the EA.

As the bridge will fully span the Hanakāpīʻai Stream, it was determined that further permitting with the USACE would not be required. However, as you suggest, follow up with the Clean Water Branch will be made to confirm that we have met the requirements for this project.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
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February 27, 2017

MEMORANDUM

To: Sheri S. Mann, Kaua'i District Manager
Division of Forestry and Wildlife

From: Curt Cottrell, Administrator CAC
Division of State Parks

Subject: Draft Environmental Assessment (DEA) for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i

Thank you for your review and comments on the subject project and for sharing best practices management relative to the Hawaiian Hoary Bat, Hawaiian Waterbirds and Hawaiian Seabirds that may be impacted by the construction of a bridge. We will include information in the EA based on those practices to ensure there will be minimal, if any, impacts to those resources.

To address your concern about the level of the stream during flash flood conditions, the height of a 100-year flood was taken into account when the bridge was designed. We believe therefore that the bridge structure will be constructed to mitigate any compromises to its stabilizing beams and structures.

We estimate filing a Finding of No Significant Impact (FONSI) with the OEQC sometime in March, to complete the Chapter 343 process. Subsequently, work will continue on the obtainment of required permits.

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
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HONOLULU, HAWAII 96809

February 27, 2017

Mr. Adam Griesemer, Endangered Species Biologist
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
7370-K Kuamo'o Road
Kapa'a, HI 96746

Dear. Mr. Griesemer:

Thank you for the review and comments on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i.

The information that you provided to mitigate the project's impacts to Hawaiian seabirds, the Newcomb snail and the Hawaiian Hoary Bat will be included in the final EA and implemented when any management or construction activities occur.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits. Again, thank you for your comments.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
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HONOLULU, HAWAII 96809

February 27, 2017

Mr. Bart Abbott
Civil Defense

We appreciate the concerns expressed on the draft enviror
the Proposed Hanakāpīʻai Bridge Project, Nāpali Coast St

Signature: Curt A. Cottrell

Email: curt.a.cottrell@hawaii.gov

As noted in Section 3.10 of the DEA, during the ten-week construction period, depending on the level of construction activity, the trail may require intermittent closure. On days when the bridge segments are flown to the site, the trail may need to be closed for several hours or all day. Because the proposed bridge is offset from the current trail, construction activities are not expected to obstruct trail traffic constantly as other previously considered bridge alignments might have. Work on the bridge is not expected to require more than a few days of intermittent closure at a time. As such, secondary impacts to deterred hikers was not considered to be significant, and thus was not assessed.

High traffic on the bridge is not expected to prevent access by emergency personnel. The four-foot wide bridge allows for two people to pass each other comfortably. If the passage of emergency personnel is a priority, such personnel will instruct the hikers on the bridge to move to one side or the other. Additionally, the length of the bridge at 88 feet is easily cleared in a minute or two.

To clarify the ability to restore the land to a pre-project state, both the above-ground structure of the bridge and the concrete foundations of the bridge supports can be removed. However, the micro piles drilled into rock on both sides of the stream could not be removed, but the piles that extend above the rock surface could be cutoff nearly flush with the rock surface. That part of the subsurface land will be irreversibly altered. The final EA will be amended to include this distinction.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF
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February 27, 2017

Michael A. Dahilig, Director of Planning
Planning Department
County of Kaua'i
4444 Rice Street, Suite A-473
Līhu'e, Kaua'i, HI 96766

Dear Mr. Dahilig:

We appreciate the concerns expressed on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i.

As discussed in our meeting with your office in June 2016, the Division of State Parks (DSP) decided not to include a separate discussion of the proposed bridge in the Hā' ena State Park Master Plan (MP) outreach in an effort to direct focus on the issues raised on the MP. We believe separating these projects was warranted to address the immediate need for public safety at Hanakāpī' ai and the long term management at Hā' ena State Park. It became apparent that some community members perceived this as an attempt to obfuscate the bridge project – which was not the intention. Moving forward, DSP is available to discuss both projects, and will continue to clarify the actions that are in question in the respective permitting processes.

Regarding your concern about increased park visitation, as managers of this unique, historic trail and the Nāpali Coast State Wilderness Park, DSP fully agrees with the management of this area to protect and preserve its natural and cultural resources. DSP, however, doesn't believe that this management has to come at the cost of hiker safety.

What we did not fully explain, and will amend in the Final Environmental Assessment, is that trail closures, on-trail DSP personnel, and permit enforcement will continue as they have in the past and State Parks intends to increase management capacity in the future. During periods of dangerous flooding in Hanakāpī' ai, most hikers would not have access to further dangerous conditions on the far side of the stream because most hikers would be deterred from park entry by the trail closure in place. What the existing protocol cannot account for is the safety of the hikers who may have entered the park before flooding was recognized by DSP. For these individuals, the proposed bridge is needed to provide a safe way to exit the park. A greater understanding of DSP's trail closure protocol may clarify the need for a bridge in addition to trail access management.

Existing trail closure protocol requires a DSP staff member to hike into Hanakāpī' ai Valley to assess the level of flooding in Hanakāpī' ai Stream, after which a trail closure decision is made. This in-person trail

closure protocol is required, as opposed to a remote, predictive determination for two reasons: (1) the localized nature of flooding in Hanakāpīʻ ai, i.e. flooding in neighboring Hanalei cannot be used as an indicator of flooding in Hanakāpīʻ ai; and (2) the rapid nature of flooding in Hanakāpīʻ ai, i.e. even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore, we believe it is impracticable to rely upon predictive trail closures to prevent hikers from entering dangerous conditions. The existing trail closure system equally cannot ensure the safety of those hikers who have started hiking the trail before the DSP staff reached Hanakāpīʻ ai stream, or those who are hiking out of Kalalau or Hanakoa valleys after camping the night before.

For these isolated hikers, the proposed bridge would grant them safe passage across the stream, eliminating the need for expensive and dangerous helicopter rescue missions.

We share your concern that dangerous conditions beyond the initial stream crossing, including multiple stream crossings along the Hanakāpīʻ ai Falls Trail, can threaten hiker safety. It is for this reason that our existing protocols for closing the trail will remain intact even with the bridge installed. In our staff's experience, trail closure is an effective way to keep people from accessing dangerous conditions on the trail. This is the foundation for our statement that the installation of the bridge will not increase park visitation on days of inclement weather. For those hikers mentioned above, that may enter the trail before trail closure, we have increased signage and other outreach efforts to inform them of the dangers upstream. Additionally, the installation of the bridge can allow State Parks staff to cross the stream to assist and direct hikers on the far side of the stream, instead of having to shout across the stream as they now have to.

Under normal, non-flood conditions, the 1-foot deep Hanakāpīʻ ai Stream crossing does not pose a significant obstacle to those hikers with the physical ability to traverse the 2-mile trail to reach Hanakāpīʻ ai. In our experience, very few if any hikers decide not to cross the stream once they have reached it. Therefore, we do not believe that because of the proposed bridge more hikers would be able to access Hanakāpīʻ ai Beach.

The DEA notes the dangers and past statistics of drowning in the waters off Hanakāpīʻ ai Beach in order to emphasize the danger posed to hikers trapped on the far side of the stream during flood conditions who could get washed downstream if they try to ford the stream. The dangers of swimming at Hanakāpīʻ ai Beach cannot be diminished, and DSP does not believe that the bridge will be increasing exposure to this danger because: (1) during non-flood conditions, hikers can already easily reach the beach; and (2) during flood conditions, DSP will close the trail as they have in the past, limiting the exposure to those who entered the trail prior to closure. The purpose of the bridge is to serve these 'prior entrants' – offering them a safe exit without need for fording the stream, spending the night unprepared, or air and land rescue by the Kauaʻi Fire Department (KFD).

Education and outreach to inform and hopefully change the behavior of hikers is being implemented through outreach efforts of rangers and increased signage on the trail. Three panel interpretive sign displays have been installed at each end of the stream crossings that alert hikers of dangerous surf, strong currents, flash floods and falling rocks. Additionally, DSP's future management scheme includes additional on-trail staff members to assist with informing hikers of the potential risks and advising safe behavior. We would like to increase enforcement of penalties for hikers violating trail closure, as it has for increasing enforcement of penalties for campers without permits in Kalalau Valley in the last year. There already exists a penalty for violating trail closures, which we will need to coordinate with DLNR's Division of Conservation and Resource Enforcement (DOCARE) to enforce these violations. DSP believes that improving educational outreach and enforcement actions, as you suggested, in concert with the installation of a bridge, will augment hikers' safety.

State Parks shares the Kaua' i Planning Department's concerns for safety of park visitors at Hanakāpī' ai Beach in high surf. The dangerous ocean conditions are a contributing factor to proposing this bridge. This bridge will decrease the risk of stranded hikers attempting to cross the flooded stream of their own accord and being washed downstream into those dangerous conditions. This, in turn will alleviate the need for the KFD to mount rescues to preempt hikers making such dangerous decisions. The proposed bridge is not expected to increase hikers' exposure to this ocean hazard. Under normal conditions, all hikers who are capable of hiking the 2-mile trail to Hanakāpī' ai are able to cross the 1-foot deep stream. Therefore, the addition of a bridge is not expected to increase the numbers of fair weather visitors. During flood times, the DSP's management team will close the trail appropriately, which will limit the number of hikers entering the park after the closure. What the bridge will increase is the ability of hikers who entered the park before the trail was closed to safely exit the park without having to ford the stream and risk exposure to said dangerous ocean conditions.

We acknowledge the need to apply for an SMA Permit and will be sure to address all of the issues stated in your letter in our SMA Major Use Permit Application.

We appreciate the suggested alternatives, including gates and a zip line, both of which we have considered though not pursued. As discussed above, we believe that the bridge in itself, will not increase park visitation during safe, non-emergency conditions. The addition of gates on the bridge would not limit trail usage under normal conditions and would add an obstacle to safe passage across the stream during times of emergency, and thus create a safety hazard. The zip line was considered infeasible because of the equipment maintenance and training that would be required to ensure that the zip line served as a safe rescue option in emergencies.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF
HAWAII

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

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DEPUTY DIRECTOR - WATER

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DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2017

Mr. Edward Doi, Chief of Water Resources and Planning Division
Department of Water, County of Kauai
4398 Pua Loke St.
P.O. Box 1706
Līhu'e, HI 96766

Dear. Mr. Doi:

Thank you for the review and comments on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i. We note that your office has no objections to the proposed project.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF
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February 27, 2017

Presley Wann, President
Hui Maka'ainana O Makana
P.O. Box 1225
Hanalei, HI 96714-1225

Aloha Presley:

Thank you for taking the time to send your comments on the draft environmental assessment (DEA) for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i. We note that you were not able to ask the Hui to approve these comments and therefore you are writing as a concerned community member.

Like you, we believe that the construction of the bridge will provide a safer means for stranded hikers to get safely away from conditions of stream flooding. The bridge will also decrease the need for emergency rescue personnel to rescue stranded hikers, thereby decreasing the risks to rescue personnel and will relieve the County of some of the costs for such rescues.

We estimate filing a Finding of No Significant Impact (FONSI) and a final EA with the OEQC sometime in March, to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of required permits. Thank you again for your time and concerns.

Sincerely,
Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
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February 27, 2017

Joel Guy, President
Hanalei-Hā' ena Community Association
P.O. Box 1072
Hanalei, HI 96714

Caren Diamond, Chair
Hanalei-to-Hā' ena Community
Association Land Use Committee

Dear Mr. Guy and Ms. Diamond:

We appreciate the concerns expressed on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i.

As managers of this unique, historic trail and the Nāpali Coast State Wilderness Park, we agree with the need to limit the usage of the area to preserve its natural and cultural resources. However, we do not believe that this management has to come at the cost of hiker safety.

What we did not fully explain, and will amend in the Final EA, is that trail closures, on-trail State Parks personnel, and permit enforcement will continue as they have in the past and State Parks intends to increase management capacity in the future. During periods of dangerous flooding in Hanakāpī' ai, most hikers would not have access to further dangerous conditions on the far side of the stream because most hikers would be deterred from park entry by the trail closure in place. What the existing protocol cannot account for is the safety of the hikers who may have entered the park before flooding was recognized by State Parks personnel. For these individuals, the proposed bridge is needed to provide a safe way to exit the park. A greater understanding of our trail closure protocol may clarify the need for a bridge in addition to trail access management.

Existing trail closure protocol requires a State Parks staff member to hike into Hanakāpī' ai Valley to assess the level of flooding in Hanakāpī' ai Stream, after which a trail closure decision is made. This in-person trail closure protocol is required, as opposed to a remote, predictive determination for two reasons: (1) the localized nature of flooding in Hanakāpī' ai, i.e. flooding in neighboring Hanalei cannot be used as an indicator of flooding in Hanakāpī' ai; and (2) the rapid nature of flooding in Hanakāpī' ai, i.e. even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore, we believe it is impracticable to rely upon predictive trail closures to prevent hikers from entering dangerous conditions. The existing trail closure system equally cannot ensure the safety of those hikers who have started hiking the trail before the State Parks staff reached Hanakāpī' ai stream, or those who are hiking out of Kalalau or Hanakoa valleys after camping the night before.

For these isolated hikers, the proposed bridge would grant them safe passage across the stream, eliminating the need for expensive and dangerous helicopter rescue missions.

We share your concern that dangerous conditions beyond the initial stream crossing, including multiple stream crossings along the Hanakāpīʻ ai Falls Trail, can threaten hiker safety. It is for this reason that the existing protocols for closing the trail will remain intact even with the bridge installed. In our staff's experience, trail closure is an effective way to keep people from accessing dangerous conditions on the trail. This is the foundation for our statement that the installation of the bridge will not increase park visitation on days of inclement weather. For those hikers, mentioned above, that may enter the trail before trail closure, we have increased signage and conduct other outreach efforts to inform them of the dangers upstream. Additionally, the installation of the bridge can allow State Parks staff to cross the stream to assist and direct hikers on the far side of the stream, instead of having to shout across the stream as they now have to.

Under normal, non-flood conditions, the 1-foot deep Hanakāpīʻ ai Stream crossing does not pose a significant obstacle to those hikers with the physical ability to traverse the 2-mile trail to reach Hanakāpīʻ ai. In our experience, very few, if any, hikers decide not to cross the stream once they have reached it. Therefore, DSP does not believe that because of the proposed bridge that more hikers would be able to access Hanakāpīʻ ai Beach.

The DEA notes the dangers and past statistics of drowning in the waters off Hanakāpīʻ ai Beach in order to emphasize the danger posed to hikers trapped on the far side of the stream during flood conditions who could get washed downstream if they try to ford the stream. The dangers of swimming at Hanakāpīʻ ai Beach cannot be diminished, and DSP does not believe that the bridge will be increasing exposure to this danger because: (1) during non-flood conditions, hikers can already easily reach the beach; and (2) during flood conditions, State Parks will close the trail as they have in the past, limiting the exposure to those who entered the trail prior to closure. The purpose of the bridge is to serve these 'prior entrants' – offering them a safe exit without the need for fording the stream, spending the night unprepared, or being rescued by helicopter.

We appreciate HHCA's suggested alternatives, all of which we thoroughly considered and many of which have already been or are being implemented. Education and outreach to inform and hopefully change the behavior of hikers is being implemented through outreach efforts of rangers and increased signage on the trail. Three panel interpretive sign displays have been installed at each end of the stream crossings that alert hikers of dangerous surf, strong currents, flash floods and falling rocks. Additionally, our future management scheme will include additional on-trail staff members to assist with informing hikers of the potential risks and advising safe behavior. Further, we would like to increase enforcement of penalties for hikers violating trail closure, as it has for increasing enforcement of penalties for campers without permits in Kalalau Valley in the last year. There already exists a penalty for violating trail closures, which we will need to coordinate with DOCARE to enforce. In our experience managing this and other State Parks, these outreach efforts and increased enforcement will not be sufficient to keep hikers safe and eliminate the cost of helicopter rescue missions. But, we believe that increasing education and enforcement, as HHCA suggests, in concert with the installation of a bridge, will improve hikers' safety while not altering the visitation patterns of the park.

We agree that the implementation of the Hāʻ ena State Park Master Plan is on a slower timeline that the currently proposed project. Our reference to its proposed visitation limit was intended to acknowledge the need for a more comprehensive park management effort that cannot be addressed in the current project. Larger efforts such as the Hāʻ ena Master Plan require additional time for community input and approval. It is clear that HHCA shares our concern for unchecked park visitation and we hope that HHCA can express their support of that aspect of the Master Plan through the community outreach process.

Although the specifics of helicopter transport is yet to be established, the closest staging area from which the pre-fabricated bridge segments could be transported to the project site would be Hā' ena. We believe the 3 trips for bridge installation from this area, would be a cost efficient use of State funds. The helicopter trips for delivering construction personnel and equipment to and from the project site have not yet been determined either but are more flexible in pick-up location than the bridge segment delivery trips. All efforts will be made to minimize the use of the Hanalei, Wainiha and Hā' ena residential communities. Alternative staging areas such as Kōke'e and Polihale will be considered.

Despite this short-term inconvenience, the proposed bridge's installation would drastically reduce the number of helicopter rescue missions and emergency personnel dispatched to and through the Hanalei, Wainiha and Hā' ena communities in the years after installation.

We estimate filing the final EA with a Finding of No Significant Impact (FONSI) sometime in March 2017 to complete the Chapter 343, HRS, process. Subsequently, work will continue on the obtainment of the required permits.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

DAVID Y. IGE
GOVERNOR OF
HAWAII

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

KEKOA KALUHIWA
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DEPARTMENT OF LAND AND NATURAL RESOURCES

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POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2017

Carl F. Imparato
Sierra Club of Hawai'i, Kaua'i Group
P.O. Box 3412
Līhu'e, Kaua'i, HI 96766

Dear Mr. Imparato:

We appreciate the concerns expressed on the draft environmental assessment (DEA) that was prepared for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i.

As managers of this unique, historic trail and the Nāpali Coast State Wilderness Park, the Division of State Parks (DSP) whole-heartedly agrees with the need to limit the usage of the area to preserve its natural and cultural resources. We, however, do not believe that this management has to come at the cost of hiker safety.

What we did not fully explain, and will amend in the Final EA, is that trail closures, on-trail DSP personnel, and permit enforcement will continue as they have in the past and State Parks intends to increase management capacity in the future. During periods of dangerous flooding in Hanakāpī' ai, most hikers would not have access to further dangerous conditions on the far side of the stream because most hikers would be deterred from park entry by the trail closure in place. What the existing protocol cannot account for is the safety of the hikers who may have entered the park before flooding was recognized by State Parks personnel. For these individuals, the proposed bridge is needed to provide a safe way to exit the park. A greater understanding of DSP's trail closure protocol may clarify the need for a bridge in addition to trail access management.

Existing trail closure protocol requires a DSP staff member to hike into Hanakāpī' ai Valley to assess the level of flooding in Hanakāpī' ai Stream, after which a trail closure decision is made. This in-person trail closure protocol is required, as opposed to a remote, predictive determination for two reasons: (1) the localized nature of flooding in Hanakāpī' ai, i.e. flooding in neighboring Hanalei cannot be used as an indicator of flooding in Hanakāpī' ai; and (2) the rapid nature of flooding in Hanakāpī' ai, i.e. even if a remotely accessible rain gauge could be installed in the valley, the time between high rainfall registering in the gauge and dangerous conditions developing downstream would be short. Therefore, we believe it is impracticable to rely upon predictive trail closures to prevent hikers from entering dangerous conditions. The existing trail closure system equally cannot ensure the safety of those hikers who have started hiking the trail before the State Parks staff reached Hanakāpī' ai stream, or those who are hiking out of Kalalau or Hanakoa valleys after camping the night before.

For these isolated hikers, the proposed bridge would grant them safe passage across the stream, eliminating the need for expensive and dangerous helicopter rescue missions.

We share your concern that dangerous conditions beyond the initial stream crossing, including multiple stream crossings along the Hanakāpīʻ ai Falls Trail, can threaten hiker safety. It is for this reason that the existing protocols for closing the trail will remain intact even with the bridge installed. In our staff's experience, trail closure is an effective way to keep people from accessing dangerous conditions on the trail. This is the foundation for our statement that the installation of the bridge will not increase park visitation on days of inclement weather. For those hikers, mentioned above, that may enter the trail before trail closure, we have increased signage and conduct other outreach efforts to inform them of the dangers upstream. Additionally, the installation of the bridge can allow State Parks staff to cross the stream to assist and direct hikers on the far side of the stream, instead of having to shout across the stream as they now have to.

Under normal, non-flood conditions, the 1-foot deep Hanakāpīʻ ai Stream crossing does not pose a significant obstacle to those hikers with the physical ability to traverse the 2-mile trail to reach Hanakāpīʻ ai. In our experience, very few, if any, hikers decide not to cross the stream once they have reached it. Therefore, we do not believe that because of the proposed bridge that more hikers would be able to access Hanakāpīʻ ai Beach.

The DEA notes the dangers and past statistics of drowning in the waters off Hanakāpīʻ ai Beach in order to emphasis the danger posed to hikers trapped on the far side of the stream during flood conditions who could get washed downstream if they try to ford the stream. The dangers of swimming at Hanakāpīʻ ai Beach cannot be diminished, and DSP does not believe that the bridge will be increasing exposure to this danger because: (1) during non-flood conditions, hikers can already easily reach the beach; and (2) during flood conditions, State Parks will close the trail as they have in the past, limiting the exposure to those who entered the trail prior to closure. The purpose of the bridge is to serve these 'prior entrants' – offering them a safe exit without the need for fording the stream or being rescued by helicopter.

We appreciate Sierra Club's suggested 'soft' alternative, and note that it is already being implemented. Education and outreach to inform and hopefully change the behavior of hikers is being implemented through outreach efforts of rangers and increased signage on the trail. Three panel interpretive sign displays have been installed at each end of the stream crossings that alert hikers of dangerous surf, strong currents, flash floods and falling rocks. Additionally, our future management scheme will include additional on-trail staff members to assist with informing hikers of the potential risks and advising safe behavior. Further, we would like to increase enforcement of penalties for hikers violating trail closure, as it has for increasing enforcement of penalties for campers without permits in Kalalau Valley in the last year. There already exists a penalty for violating trail closures, which we will need to coordinate with DOCARE to enforce. In our experience managing this and other State Parks, these outreach efforts and increased enforcement will not be sufficient to keep hikers safe and eliminate the cost of helicopter rescue missions. But, we believe that increasing education and enforcement, in concert with the installation of a bridge, will improve hikers' safety while not altering the visitation patterns of the park.

We have included the Kauaʻi Group of the Sierra Club on the distribution list for all State Parks' projects subject to the environmental review process under Chapter 343, HRS, and related correspondences and appreciate your interest and concerns.

Very truly yours,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator

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HONOLULU, HAWAII 96809

February 27, 2017

Ms. Heu'ionalani Wyeth
P.O. Box 189
Anahola, Kaua'i, Hawai'i 96703

Dear Ms. Wyeth:

Thank you for taking the time to send us your comments on the draft Environmental Assessment (DEA) for the Proposed Hanakāpī'ai Bridge Project, Nāpali Coast State Wilderness Park, Nāpali District, Kaua'i.

Like you, we believe that the construction of the bridge will provide a safer means for stranded hikers to get safely away from conditions of stream flooding. The bridge will also decrease the need for emergency rescue response personnel to rescue stranded hikers and relieve the County of some of the costs for such rescues.

We estimate filing a Finding of No Significant Impact (FONSI) and a final EA with the OEQC sometime in March 2017, to complete the Chapter 343 process. Subsequently, work will continue on the obtainment of required permits. Thank you again for your time and concerns.

Sincerely,

Curt A. Cottrell

Curt A. Cottrell
State Parks Administrator